The Fermi-GBM 3-year X-ray Burst Catalog

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ABSTRACT

The Fermi Gamma Ray Burst Monitor (GBM) is an all sky gamma-ray monitor well known in the gamma-ray burst community. Although GBM excels in detecting the hard, bright extragalactic GRBs, its sensitivity above 8 keV and all-sky view make it an excellent instrument for the detection of rare, short-lived Galactic transients. In March 2010, we initiated a systematic search for transients using GBM data. We conclude this phase of the search by presenting a 3 year catalog of 1084 X-ray bursts. Using spectral analysis, location and spatial distributions we classified the 1084 events into 752 thermonuclear X-ray bursts, 267 transient events from accretion flares and X-ray pulses, and 65 untriggered gamma-ray bursts. All thermonuclear bursts have peak blackbody temperatures broadly consistent with photospheric radius expanison (PRE) bursts. We find an average rate of 1.4 PRE bursts per day, integrated over all Galactic bursters within about 10 kpc. These include 33 and 10 bursts from the ultra-compact X-ray binaries 4U 0614+09 and 2S 0918-549, respectively. We discuss these recurrence times and estimate the total mass ejected by PRE bursts in our Galaxy.

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1. Introduction

Rare, unpredictable and transient astronomical phenomena are difficult to observe due to their very own nature, yet they often lead to exciting astrophysical discoveries. At any wavelength, the most efficient way of detecting rare transients is to maximize the observed field of view (FoV). The high-energy (X-ray and Gamma-ray) sky can vary rapidly, on timescales much shorter than hours. If we are interested in *short-lived* rare transient phenomena (seconds to minutes long), the most relevant observational capability is the *instantaneous* FoV. Even though serendipitous detections occur, neither pointed narrow FoV instruments nor all-sky monitors based on scanning techniques are well suited to catch such short and rare events.

The Gamma-ray burst monitor (GBM) onboard the *Fermi* observatory has an instantaneous FoV of about 75% of the sky (Meegan et al. 2009) and is sensitive to photon energies down to 8 keV. Even though it was designed to detect and characterize Gamma-ray bursts (GRBs), these characteristics make GBM a unique instrument to detect rare, short and bright X-ray bursts (XRBs). In March 2010, we initiated a systematic search for XRBs using *Fermi*-GBM data (Section 2). In the first three years, this search has yielded 752 thermonuclear X-ray bursts (tXRBs; Secs. 1.1 & 3.1), 267 transient events from accretion flares and X-ray pulses (aFXPs), as well as 65 untriggered long gamma ray bursts (uGRBs). We present here the *Fermi*-GBM 3-year X-ray Burst Catalog and summarize its main results with an emphasis on tXRBs.

1.1. The rare and most energetic thermonuclear bursts

The accreted matter in neutron star low-mass X-ray binaries (NS-LMXBs) piles up on the neutron star surface, reaching regions of increased density and becoming fuel for thermonuclear reactions. When ignition conditions are met at the bottom of the accreted shell, unstable reactions trigger a thermonuclear runaway that quickly burns the pile of fuel, generally a mix of hydrogen (H), helium (He) and heavier elements ("metals"). This cyclic phenomenon has been observed for four decades in what is know as thermonuclear (type I X-ray) bursts (Grindlay et al. 1976; Belian et al. 1976).

The main parameter which sets the frequency or *recurrence time* of thermonuclear X-ray Bursts (tXRBs) is the *mass accretion rate* per unit area, $\dot{m}$ (Fujimoto et al. 1981;

Bildsten 1998). The main reason is simple: $\dot{m}$ sets the rate at which fuel is replenished between tXRBs. However, other factors play an important role in the tXRB recurrence time, including composition and the thermal state of the NS envelope. In particular, at the lowest $\dot{m}$ (near or below 1% of the Eddington limit) the heat flux from the NS crust can critically influence the ignition conditions for tXRBs. Thus we can potentially use low-$\dot{m}$ tXRBs to constrain the internal properties of NSs (Cumming et al. 2006). However, because recurrence times of low-$\dot{m}$ tXRBS are of the order of weeks to months, they are extremely difficult to measure with pointed or scanning X-ray detectors. GBM has opened a new window to these events, and it is yielding the first accurate measurements of their recurrence times (Linares et al. 2012).

2. The Fermi-GBM X-ray Burst Monitor

GBM is an all sky monitor whose primary objective is to extend the energy range over which gamma-ray bursts are observed in the Large Area Telescope (LAT) on *Fermi* (Meegan et al. 2009). GBM consists of 12 NaI detectors with a diameter of 12.7 cm and a thickness of 1.27 cm and two BGO detectors with a diameter and thickness of 12.7 cm. The NaI detectors have an energy range from 8 keV to 1 MeV while the BGOs extend the energy range to 40 MeV. The GBM flight software was designed so that GBM can trigger on-board in response to impulsive events, when the count rates recorded in two or more NaI detectors significantly exceed the background count rate on at least one time-scale from 16 ms to 4.096 s in at least one of four energy ranges above 25 keV. The lower energy and longer time-scales are inaccessible to the on-board triggering algorithms owing to strong variations in background rates that are incompatible with a simple background modeling needed for automated operation on a spacecraft. Between 25 and 50 keV, only the shortest time-scales are probed on-board (under 128 ms). We report here on our search of GBM continuous data for impulsive events that are too long and too spectrally soft to trigger on-board.

GBM has three continuous data types: CTIME data with nominal 0.256-second time resolution and 8-channel spectral resolution used for event detection and localization, CSPEC data with nominal 4.096-second time resolution and 128-channel spectral resolution which is used for spectral modeling, and Continuous Time Tagged Event (CTTE) data with time stamps (2μs precision) on individual events at full 128-channel spectral resolution that was made available November 2012. The NaI CTIME and CSPEC data from 8-50 keV are used in the following analysis.

2.1. Data Selection

The Fermi-GBM X-ray Burst Monitor relies on daily inspection of CTIME channel 1 (12-25 keV) data and began operations in 2010 March 12. The CTIME data are rebinned to a minimum of 0.25 second time bins to adjust intervals of high resolution data initiated by instrument triggers. NaI detector rates, from all 12 detectors and channels 0-2 (8-50 keV), are automatically filtered removing phosphorescence events, times of high total rates, times near the SAA and intervals of rapid spacecraft slews. An empirical background model is fit to the detector rates in each channel (0-2) and each detector. The background model has terms to account for bright sources and their Earth occultations plus a quadratic spline model to account for the low frequency trends of the remaining background (below $\sim$1 mHz). The background model is visually compared to the rates in the energy band between 12 and 25 keV with a time resolution of $\sim$ 8.2 seconds. Transient events that rise above the background model are saved by manually selecting the corresponding time intervals. Source rates and background rates for the first three energy bands (8 - 50 keV) along with mid-times of these manually-selected time intervals are recorded. Between March 2010 and March 2013, the search resulted in 5093 selected events.

type I X-ray bursts, the softest population of events likely to be detected, are expected to have a blackbody spectrum with a temperature between about 0.5 and 3 keV. Due to the gradual rollover in the expected photon spectrum between 12 and 25 keV and the steep drop in effective area in CTIME channel 0 ($\sim$ 8-12 keV) data (Meegan et al. 2009), channel 1 (12-25 keV) is the most sensitive channel to these XRBs. The choice of 8.2 second timing resolution for channel 1 data is a compromise between the desire to maximize our sensitivity to these events and the time demands of this labor-intensive process, and limits the minimal detectable burst duration to around 10 seconds. Background count rate variations over the *Fermi* orbit, caused both by changes in geomagnetic latitude and varying spacecraft attitude, prevent visual identification of very long bursts. Our search is thus sensitive to bursts and flares with durations in the 10 – 1000 s range.

2.2. Localization

Localization of our events of interest utilizes the angular response of the NaI detectors to reconstruct the most likely arrival direction based on the differences in background-subtracted count rates recorded in 12 NaI detectors that have different sky orientations. The method is adapted from the method used for GBM GRB localization (Connaughton et al. 2015), with a cruder background fitting method. We use data between 12 – 50 keV and the model rates more suitable for sources with softer energy spectra: galactic transients (power-law with index = -2), solar flares (power-law with index = -3), and type I XRBs (blackbody with temperature = 4 keV). This process yields a localization and a 68% statistical uncertainty radius (assuming a circular uncertainty region), σ. We also determine a goodness-of-fit parameter, χ^2, of the localization. Other parameters of interest include a rough event duration, a list of detectors with an angle between source and detector normal less than 60°, the net count rates in these detectors, and hardness ratios derived from count rates in different energy channels. If the event localizes to within 10° of the centroid of the solar disk or is less than 3σ from the Sun position then the event is rejected, as are events with localizations clearly (beyond the statistical uncertainty) beneath the Earth's horizon.

If the net count rates of the two brightest detectors are inconsistent with a single source direction then the event is rejected. Such events may occur during a particle shower within or near the spacecraft and are not associated with an astronomical source. An additional check is performed to eliminate particle events which originate in the spacecraft. These events appear to have a hard spectra and thus might be initially classified as uGRBs but unlike GRBs their light curves in the 50-300 keV range are very similar for all 12 NaI detectors. This produces a poor χ^2 in the localization fit and we use a cut-off in χ^2 of 1000 to reject these particle events, more tolerant than reported in (Connaughton et al. 2015) because the quality of the background fits over the low-energy channel data analyzed here is more variable, and even real astrophysical events may produce localizations with large χ^2 values. All other events are considered XRB candidates. Once the events are localized, they are searched for temporal and spatial coincidence with GBM and *Swift* triggered GRBs. If the XRB candidate event locates within 3σ of a triggered GRB and the XRB candidate event mid-time occurs within 150% of the T-90 duration of the the GRB trigger time then the XRB event is considered a triggered GRB and rejected. After these filtering steps there are 2253 events remaining of the original manually selected sample of 5093. The vast majority of rejected events were identified as solar flares.

2.3. Spectral Analysis

Response matrices for each XRB candidate event are created from a response model constructed from simulations incorporating the Fermi spacecraft mass model into GEANT4 (Agostinelli and et (2003)). CSPEC data are used for spectral analysis in RMFIT, a forward-folding spectral analysis software often used in GBM gamma ray burst studies.[1] Through localization and visual inspection (see Section 3.2) many of the events were identified with

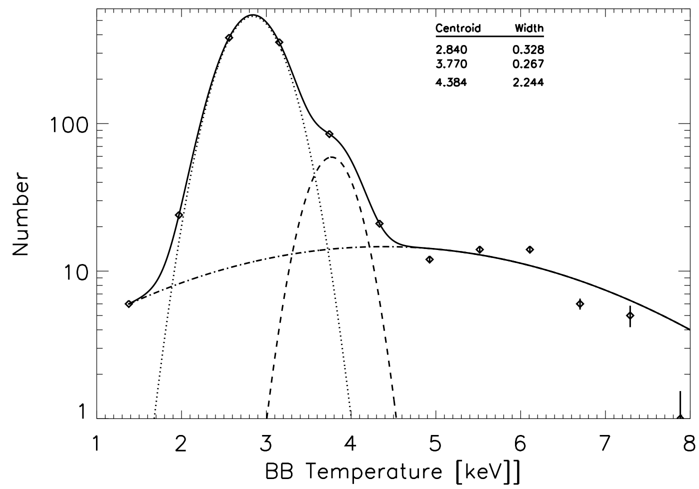
[1]https://gamma-wiki.mpe.mpg.de/GBM/RMFITPublicReleasePage

Sco X-1 and Vela X-1 (aFXPs) and spectral analysis was not necessary for identification. We did; however, performed spectral analysis on a few of these in order to aid in the association of those events in which identification was not apparent. Blackbody and power-law models are fit to all of the remaining data, the former because it is physically motivated for tXRBs and the latter because it is a simple model that can be used to fit a variety of events, and may be useful to classify their spectral hardness even if the model does not fully describe the data.

In the course of our spectral analysis, we identified fits for which the residuals of the unfolded spectrum for different detectors were inconsistent with each other. This is evidence for a bad localization which we attributed to poor background fits in one or more detectors. We selected background time intervals before and after the source time interval, as is done for GRB localization by the GBM team. We fit the selections with a polynomial (usually a quadratic but occasionally a higher order polynomial is necessary to fit the data) for each detector and for each channel between 0 and 2 (8-50 keV). The event is selected and the fitted backgrounds subtracted. A new localization is performed and the event is labeled as before. Subsequent localizations almost invariably provided an improved localization χ^2 and smaller error. This was most often due to the previous background fit including the source and reducing the residual rates in each detector in a non-uniform manner thus producing an erroneous localization and resulting in poor detector responses.

Weak events (85) in which spectral analysis was not possible were rejected. With these rejected events and events that were reclassified as solar due to the new localization, there remained 1084 XRB candidates. Figure 1 shows the results of the spectral modeling of these XRB candidates. The top panel is a histogram of the resulting temperatures from blackbody fits while the lower panel is a histogram of the indices from power-law fits. The histograms are fit to a model that consists of multiple gaussians. The power-law distribution is well fit with two gaussians with $\chi^2 = 85$ with 101 DOF. The blackbody distribution required three gaussians for a fit with $\chi^2 = 87$ with 56 DOF.

The energy spectra of tXRBs is expected to be a blackbody with temperature between 0.5 and 3.0 keV. Our results for 4U 0614+09 (Linares et al. 2012) and Figure 1 suggest that GBM is sensitive to bursts with temperatures at the high end of this range. The characteristics of event 10032800979 (Table 5), which has been identified as a tXRB from 4U 0614+09 (Linares et al. 2012), was used to demonstrate our ability to recover the temperature using the spectral analysis approach described above. 1000 simulated data sets were created for the NaI detectors N0, N1, N9 and NA for the brightest 4.1 second bin which has an energy flux (10-100 keV) of $(7.57 \pm 0.33)\mathrm{E}^{-8}$ erg s^{-1} cm^{-2} and another 1000 data sets for a 4.1 second bin in the tail of the burst which has an 10 -100 keV energy flux of $(3.12 \pm 0.29)\mathrm{E}^{-8}$



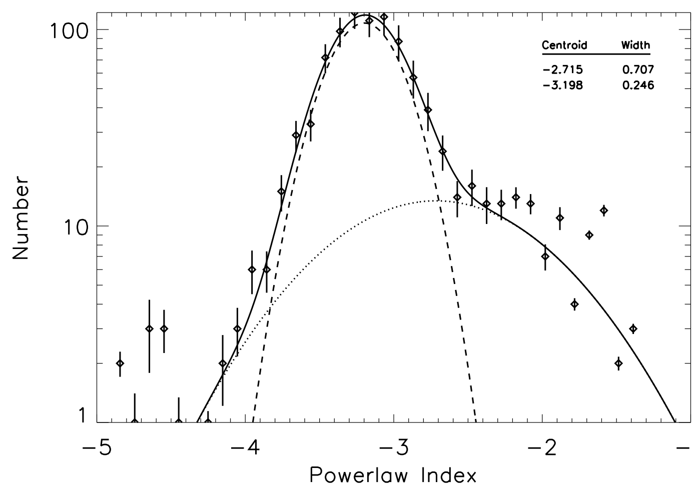


Fig. 1.— Top: Distribution of the temperatures in keV from the blackbody fits to the XRB event spectra. Diamonds are the data points. The solid line is the total model and the dashed and dotted lines are the gaussian components of the total model. Bottom: Distribution of the index from the power-law fits to the XRB event spectra. Diamonds are the data points. The solid line is the total model and the dashed and dotted lines are the gaussian components of the total model.

erg s^{-1} cm^{-2}. The best fit temperatures for this burst in these time bins are 3.28 ± 0.12 keV and 3.00 ± 0.24 keV respectively. A blackbody spectrum with a temperature of 3.0 keV is used to simulate the data. The simulated data are fit to a blackbody spectrum resulting in the best fit spectral temperature centered on 3.0 ± 0.16 keV for the brightest interval and

3.0 ± 0.3 keV for the weak interval assuming the temperatures are normally distributed. The resulting temperature distributions and fits to a gaussian function are shown in Figure 2. These results indicate that any systematic error in the spectral analysis is not dominated by

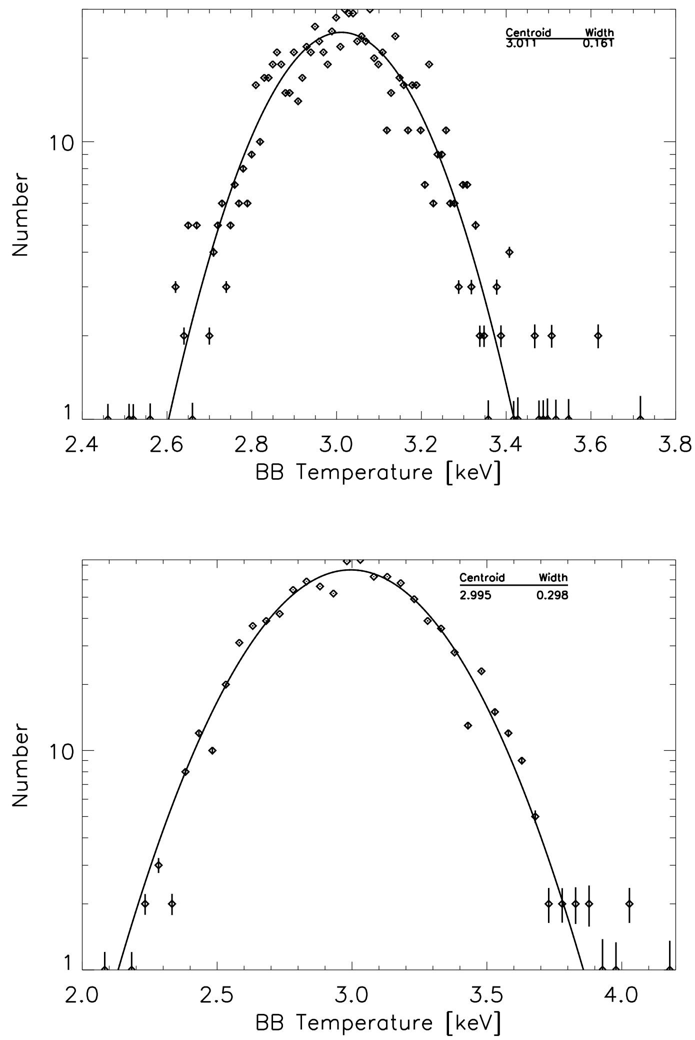


Fig. 2.— Top: Distribution of the temperatures in keV from the blackbody fits to the simulated data from the peak of event 10032800979. Diamonds are the data points. The solid line is the best fit gaussian. Bottom: Distribution of the temperatures in keV from the blackbody fits to the simulated data from the tail of event 10032800979. Diamonds are the data points. The solid line is the best fit gaussian.

the lack of spectral sensitivity in GBM at these energies and fluxes.

We checked if scattering off the Earth's limb was a possible contributor to the systematic error in the spectral analysis by checking the proximity of the events to the Earth's limb. There were only 23 events that were within 100 seconds of the Earth's limb and only 2 less than 20 seconds. These last two events had a blackbody temperature of 3.3 ± 0.2 keV and 2.9 ± 0.2 keV and were within 10 degrees of the Galactic center. We do not expect such limb events to be a source of systematic error in our catalog.

2.4. Temporal Analysis

Temporal analysis of XRB events include the calculation of event duration, rise times, and decay times and was performed after classification (see Section 3) was finished. Due to the nature of the aFXPs (see Section 3.2), these events were excluded from the temporal analysis. Durations for these events are taken from the time interval of the original event selection. Since this analysis requires detailed visual inspection of the light curve, these events underwent additional scrutiny to ensure that aFXPs did not contaminate the remains categories.

For each event where durations are calculated, light curves for all detectors are visually inspected in the 12-25 keV energy band and background regions are selected. The background is fit to a polynomial (usually a quadratic but occasionally a higher order polynomial is necessary to fit the data). The background fit is then subtracted from the light curve. The detectors, in which signal is evident, are selected and the first three energy channels (8-50 keV) are added together and displayed as a single light curve. The peak intensity of the light curve (t_{peak}) is selected. The times at 25% of peak during the rise (t_{25}), 90% of peak during the rise (t_{90}) and 10% of the peak along the decay (t_{10}) are calculated. As in Galloway et al. (2008), the rise time t_{rise} is the time for the intensity to rise from 25% to 90% of its peak value, the duration of the event is defined as t_{10} - t_{25} and the decay time (t_{decay}) is defined as (t_{10} - t_{peak}).

Figure 3 shows the duration distribution for the three categories separated by color. The durations for each category show considerable overlap and are not used to distinguish between categories.

3. X-ray Burst Catalog

The three year XRB catalog contains 1084 events occurring between MJD 55267 and 56347 (2010 March 12 - 2013 February 24) which are classified into three categories: the tXRBs, the aFXPs, and the uGRBs. Clear distinctions between the three categories is

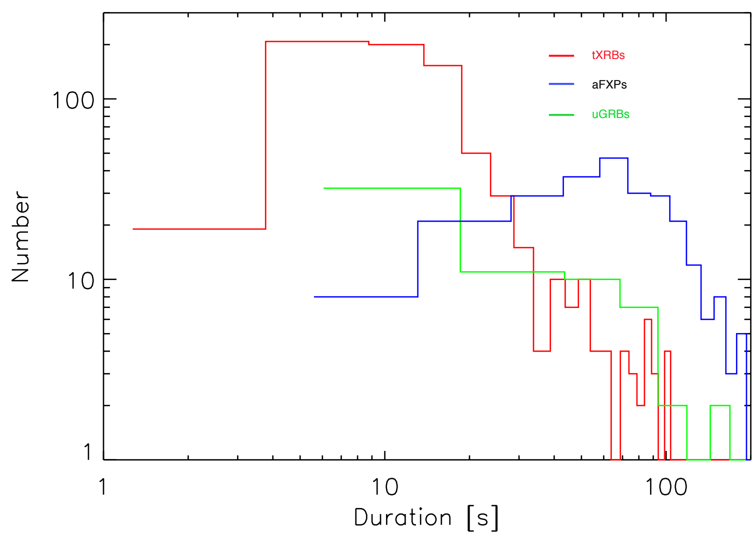


Fig. 3.— Duration distribution for the three categories of events in the catalog. The red curve is the duration distribution for the tXRBs, the green curve is the duration distribution for the uGRBs, and the blue curve is the duration distribution for the aFXPs.

not possible; therefore, we make the following quantitative effort. First, the aFXPs are categorized based on location, visual inspection of the light curve, and spectral analysis (see Section 3.2). Second, the tXRBs are categorized using spectral analysis alone and then the uGRB events are categorized based on spectral analysis and location.

The XRB events are from a wide variety of sources and their spectra is expected to be just as varied. The tXRBs are expected to have a blackbody spectrum (0.5 - 3 keV) while many of the aFXPs and uGRBs are expected to have non-thermal specta which may be modeled, in part, by a power-law. Although the power-law spectral model is generally not a good choice for all three categories of events, it serves well as an indicator of spectral properties for which all categories may be compared. We used spectral results from 32 events that we confidently associate with 4U 0614+09 from this work and Linares et al. (2012) to compare the spectral fit results from a blackbody and power-law model (see Figure 4). There is a tight correlation between the blackbody temperature and the index from a power-law fit justifying our sole use of the power-law in spectral comparisons. This correlation, when considering all events, is tight up to 4 keV (index = -2.5) after which there is considerable scatter in the blackbody temperature.

We choose to be inclusive with our category of tXRBs and use a cut-off in spectral index of -2.5 (4 keV). Any event which is not an aFXP and has a spectral index that is

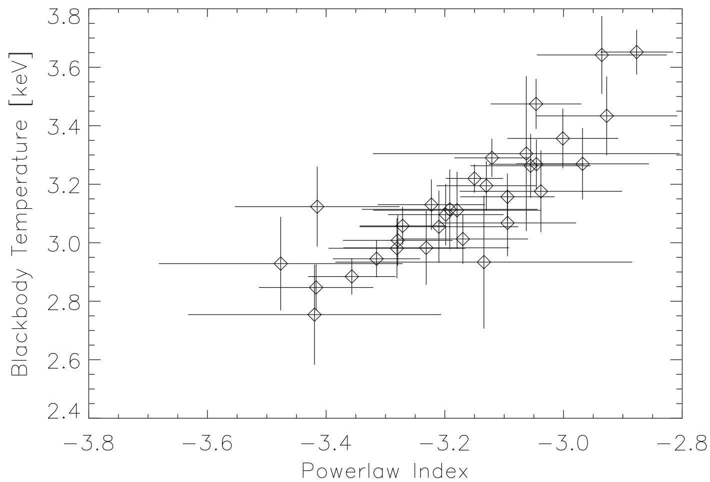


Fig. 4.— Blackbody temperature distribution for the XRB candidates associated by location and spectral shape with 4U 0614+09 show a close correlation with the index of the power-law fits to the same events.

consistent (1σ) with being softer than -2.5 ($<$ 4 keV) is categorized as a tXRB (See the red distribution in the right panel of Figure 5). This exceeds, by a good margin, the theoretical maximum temperature for type I bursts (Boutloukos et al. (2010)). The left panel of Figure 5 shows the distribution of power-law indices for all XRB events. The softer distribution has a centroid of -3.2 ± 0.25 and, being the softer distribution, is expected to contain the tXRBs. The spectral index cut-off of -2.5 represents a 3σ departure from the centroid thus validating our choice.

The uGRBs are expected to be isotropically distributed across the sky while the tXRBs are mostly at the Galactic center. If we assume GBM uniform exposure, the power-law index cutoff that maximizes the source distribution isotropy can also be used to distinguish these two categories. Using the Rayleigh Test, the maximum isotropy ($\chi^2 = 1.8/3$ dof) occurs for those events whose power-law index is consistent (1σ) with being greater than -2.43 thus again validating our choice of -2.5 as a spectral index discriminator between the uGRBs and the tXRBs. Three uGRB events had a spectral index between -2.43 and -2.5 and could arguably be placed in the tXRB classification and they were 10101041428, 11100350666, and 12062078172.

Figure 6 shows the location of all the events in Galactic coordinates with the categories distinguished by color and symbol. The purple diamonds are the tXRBs and there is a large number distributed around the Galactic center which is consistent with the distribution of

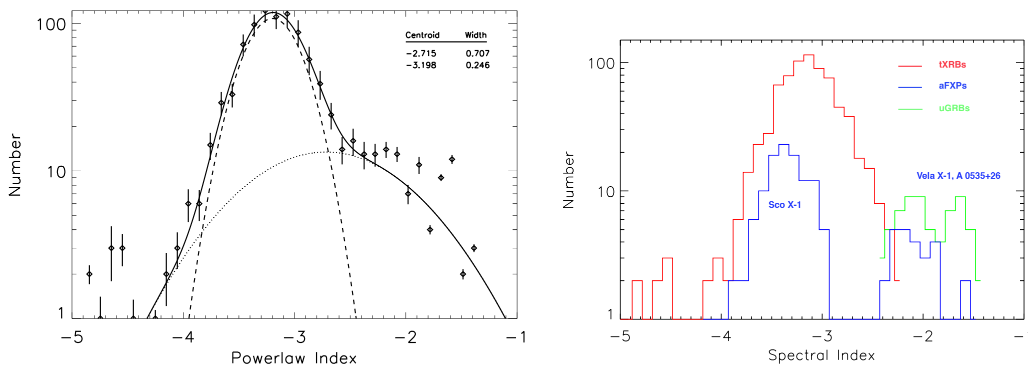


Fig. 5.— Distribution of the spectral index from power-law fits to the XRB candidate spectra. Left: Diamonds are the data points for all the XRB events. The solid line is a model fit to the data and the dashed and dotted lines are the two gaussian components of the total model. Right: Separation of indices by class of event. The red curve is the index distribution for the tXRBs. The blue curve is the index distribution for the aFXPs while the green curve is the index distribution for the uGRBs. Contributions from Sco X-1 and Vela X-1 (both aFXPs) are marked.

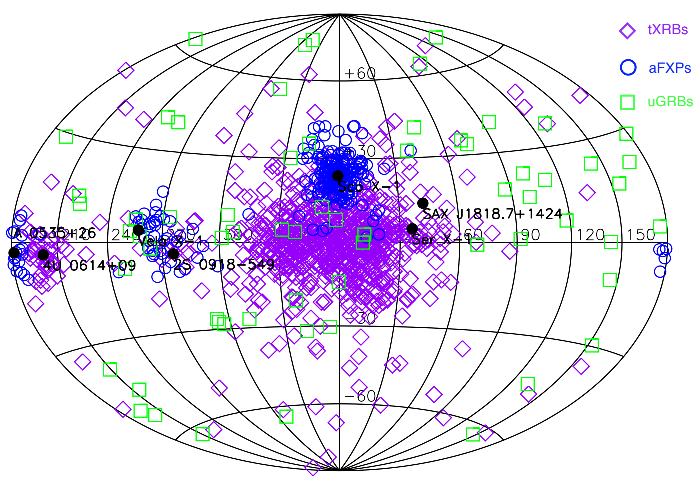


Fig. 6.— Centroids of the localization of all events in Galactic coordinates. The purple diamonds are the locations of the tXRBs. The blue circles are the location of the aFXPs, the green squares are the uGRBs. The error circles for the localization are generally larger than their symbols.

the known type I XRBs. There is a smaller cluster of events consistent with the location of 4U 0614+09. The aFXPs are shown as blue circles and are largely in three clusters centered around A 0535+26, Vela X-1 and Sco X-1. The green squares are the uGRBs which are distinguished by their isotropic distribution. The classification scheme is summarized in table 1.

Table 1: Source Classification Summary

Category	Number Events Events	Selection Process	Properties d
aFXPs	267	Location, Visual Inspection	Periodic, Continuous flares
		Spectral: (Sco X-1, $\Gamma < -3$)	
tXRBs	752	Spectral ($\Gamma < -2.5$)	Galactic; $\overline{kT} = 3.2 \pm 0.3$ keV
uGRBs	65	Spectral ($\Gamma > -2.5$); Isotropic	Hard; Extragalactic

3.1. Thermonuclear X-ray Bursts (tXRBs)

The largest category of events in our catalog are soft and their spectra are well fit using a simple blackbody model with temperature in the ∼2–5 keV range, largely consistent with the spectral properties of thermonuclear bursts from accreting neutron stars (e.g., Swank et al. 1977). They also show a spatial distribution consistent with the ∼100 known thermonuclear burst sources ("bursters"; see Figure 7), strongly concentrated towards the Galactic bulge region. For the bursts that are bright enough, time resolved spectroscopy reveals cooling along the tail of the burst, the unequivocal signature of tXRBs. All of our tXRBs associated with 4U 0614+09 are bright enough for verification via time resolved spectroscopy, including those reported by Linares et al. (2012). In the most energetic bursts from 2S 0918-549 we also detect cooling along the decay (Section 4.1.2).

We detect in total 752 tXRB candidates with 375 bright enough for time resolved spectral analysis. Their average blackbody temperature is 3.2 +/- 0.3 keV. This value is consistent with the highest temperature measured during photospheric radius expansion (PRE) bursts, when the photosphere is thought to reach the neutron star surface at the end of the Eddington-limited phase (the so-called "touch-down"; Lewin et al. 1993; in't Zand 2005; Kuulkers et al. 2010). The properties of the full tXRBs sample are presented in table 5, including morphology and spectral parameters. Light curves for these events are given in Appendix C, labeled by burst ID.

GBM location errors are typically larger than a few degrees and occasionally tens of degrees (Connaughton et al. 2015). Since the majority of known bursters are within ∼20 degrees of the Galactic center, individual identification of tXRBs is limited to those located

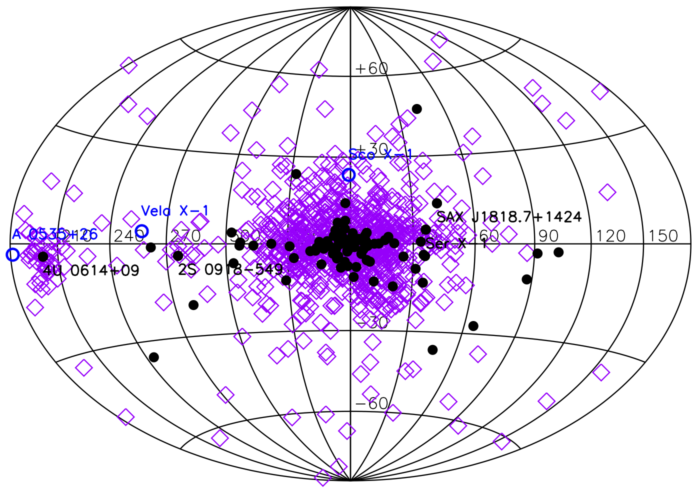


Fig. 7.— The purple diamonds are the locations of the tXRBs. The black filled circles are the locations of the known type I bursters. Those that we have multiple associations for are labeled in black. A few of the aFXP sources are labeled in blue for comparison.

sufficiently far from the Galactic bulge. Due to this limitation intrinsic to the GBM location accuracy, we make no attempt to associate events within this central distribution. Instead, we focus on those sources which are more than 30 degrees from Sag A*. Out of 103 known bursters, this leaves 26 systems that we attempt to associate with our tXRB events. Furthermore, we use MAXI 2-20 keV weekly light curves (Matsuoka et al. 2009) in an attempt to determine if a given burster was active at the time of the tXRB (see below). We place the 26 bursters far from the Galactic bulge into one of the following four categories.

- If the source is close enough to be detected in MAXI but has not flared within our catalog time period, the source is considered always off and we remove it from consideration. Only Cen X-4 is in this category.

- There are 6 bursters that are below the 10σ detection threshold in MAXI but have always shown persistent emission whenever they have been observed with pointed X-ray detectors. All but one (4U 1323-62, with an orbital period of 2.9 hr) are confirmed or candidate ultra-compact X-ray binaries (UCXBs: orbital periods shorter than 1 hr; see in't Zand et al. 2007): 4U 0513-40 (in the globular cluster NGC 1851), 4U 1246-58, 4U 1915-05 (dipper), 4U 2129+12 (M15-X2 in the globular cluster M15) and 2S 0918-549 (discussed in detail in Sec. 4.1.2). They are assumed to be persistently accreting at a low rate, and considered a candidate for association with all events. Their mass accretion rates are below 5% of the Eddington limit (in't Zand et al. 2007), which explains the low persistent flux detected by MAXI together with their distances $\gtrsim$5 kpc.

- There are 8 sources whose transient or persistent activity can be monitored with MAXI: when actively accreting they are detected above the 10σ threshold. We only consider these sources as possible associations to our events if the source exceeds 10σ threshold on the week of the event. These sources are 4U 0614+09 (persistent atoll and UCXB candidate; discussed in detail in Sec. 4.1.1), EXO 0748-676 (quasi-persistent transient, in quiescence since 2008), GS 0836-429 (transient, outburst in July 2012), 4U 1254-69 (persistent atoll dipper), Cir X-1 (peculiar atoll/Z), Ser X-1 (persistent), Aql X-1 (canonical atoll transient with typically one or two outbursts per year) and Cyg X-2 (persistent Z source) (see, e.g., Galloway et al. 2008, and references therein). EXO 0748-676 has not shown activity in MAXI during our search period, thus in practice this burster is treated as off.

- The remaining category contains 11 sources with no available MAXI weekly light curves. This category includes some of the so-called "burst-only sources" (Cornelisse et al. 2002b) as well as faint transients in which there is only one known outburst with which the source was discovered. *Swift*-BAT daily light curves for these sources, when available, do not provide a clear distinction between quiescent and active periods. These sources are: MAXI J1421-613 (outburst in January 2014, i.e., after catalog), UW Crb (peculiar persistently faint "accretion disk corona" source, known since 1990 Hakala et al. 2005), IGR J17062-6143 (persistently faint at <1% of the Eddington luminosity since its discovery in 2006 Degenaar et al. 2013, and references therein), SAX J1818.7+1424, SAX J1324.5-6313 and SAX J2224.9+5421 (Cornelisse et al. 2002b), Swift J185003.2-005627 (faint transient active in May-June 2011), MXB 1906+00, XB 1940-04, XTE J2123-058 and 4U 2129+47. They are considered for association with the tXRBs, even though their activity and mass accretion rate history are often ill constrained.

An association list is generated for each tXRB using the following criteria. If the event location is within 2σ of a burster in the association list above, then that event is associated with the source. If more than three sources are associated with an event, then the event has a large location error, and all associations are rejected as spurious. All associations are listed in the table in ascending order of distance (in σ given in parenthesis) from the source. If only one source locates within 2σ of an event then it is listed in bold type, and we consider this a robust association. Out of the total of 752 tXRBs, 685 have no associations and 29 have non-unique associations. We find unique associations for 54 tXRBs, with eight known bursters. For this reduced sample we can assess the origin of the bursts, and their properties are summarized in Table 2.

3.2. Accretion Flares and X-ray pulses

Accretion powered events such as those originating from Sco X-1, A0535+26 and Vela X-1 are identified once the their location and spectra are know (see Figure 8). Sco X-1 events have soft emission (PL index < -3) and are generally well localized to Sco X-1's position. These events are usually part of a longer flaring episode that is distinctive in GBM channel 1 (12-25 keV) data. Events from Vela X-1 and A0535+26 are typically part of a chain of

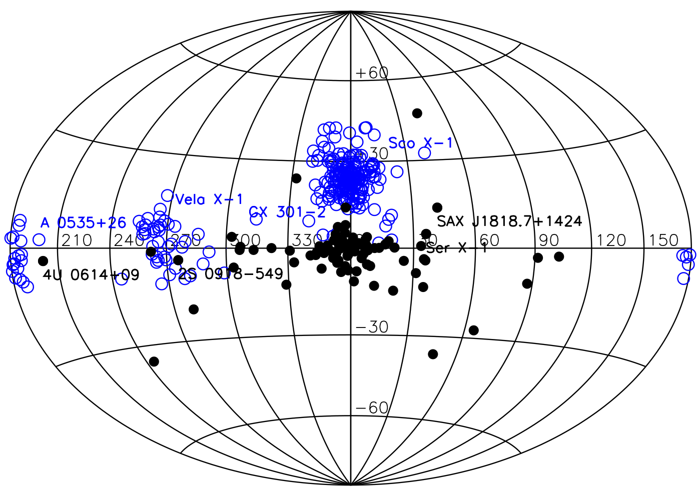


Fig. 8.— The blue circles indicate the locations of the aFXPs. The black filled circles are the locations of the known type I bursters. Those that we have associations for are labeled in black.

pulsations that are identified in the CTIME data due to the dominate harmonic of their characteristic spin periods of 103.3 s and 283.5 s respectfully as well as their harder spectra with a typical power-law index in excess of -2.5. The events associated with A 0535+26 coincide with a giant flare from A 0535+26 which occurred in February 2011 (Camero-Arranz et al. 2011).

The aFXPs are summarized in table 3. The columns are as follows: ID is the time of the midpoint, in UTC, of the event selection identified by YYMMDDTTTTT where YY indicates the last two digits of the year, MM the month, DD the day, and TTTTT is the time in seconds from the start of the day. Peak is the time (UTC) of the peak count rate for the event measured in seconds since MJD 55267. The RA and Dec is the GBM location and the Error is the statistical error on the location. Association is the source which is associated with the event. The light curves for these events are in Appendix A and identified by ID.

3.3. Untriggered GRBs

The uGRBs are hard events that are selected due to their isotropic distributed on the sky which implies an extragalactic origin (see Figure 9). In principle extragalactic bursts could

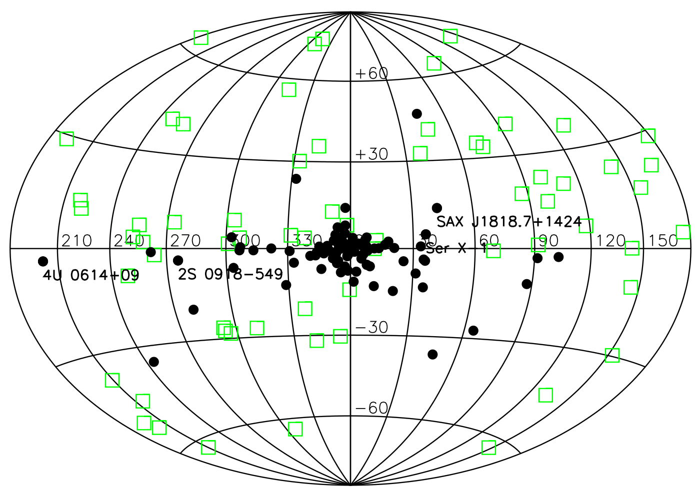


Fig. 9.— The green squares indicate the locations of the uGRBs. The black filled circles are the locations of the known type I bursters. Those that we have multiple associations for are labeled in black.

arise from sources other than GRBs but given the broad range of spectral and temporal behavior exhibited by GRBs, we use the term uGRB to denote our whole extragalactic population of bursters. Their spectra are well fit with a Band function (Band et al. (1993)) or power-law with an exponential cut-off function that is typical of GRBs. Parameters from the spectral fits using the Band function were typically not well constrained and are not reported. The spectral results for the power-law and power-law with exponential cut-off are summarized in Table 4. The first three columns are the same as the aFXPs. The next three columns (4-6) are the results of spectral fitting using a power-law with a exponential cut-off parameterized as Epeak. A '-' in these column denotes that the spectral parameters could not be constrained and these results are left out of the table. The fifth column is Epeak in keV, the sixth column (Comp Flux) is the energy flux [erg cm^{-2}s^{-1}] from 10-1000 keV, and the seventh column (Comp Flnc) is the energy fluence [erg cm^{-2}] form 10-1000 keV. The next three columns (8-10) are the results of the spectral fitting using a power-law model. The eight column is the power-law index, while the ninth and tenth columns are the energy flux and fluence from 10-100 keV. The last 4 columns are results from the temporal analysis discussed in detail in Section 2.4 and include the rise time (Rise), fall time (Fall), duration (Duration), and a column labeled Structure describing the temporal structure of the event. The Structure column contains an 'S' if the light curve is single peaked or an 'M' if the light curve is multi-peaked. If an event is multi-peaked, the rise time and fall time that is calculated may no longer represent a true rise or fall time for the event since the peak of the event could occur on any of the multiple peaks. The light curves for these events are in Appendix B and identified by ID.

4. Discussion

We have uncovered a large catalog of untriggered bursts in the GBM data that reflect the power of GBM as an all-sky monitor of diverse astrophysical phenomena in the hard X-ray energy band. Despite the difficulties inherent in uncovering these bursts in the background-limited GBM detectors, and the limitations imposed by GBM's coarse source localization, we identified at least three distinct classes of events: untriggered GRBs, accretion-powered flares and X-ray pulsations from known sources, and thermonuclear type I X-ray bursts.

Our source classification relied strongly on spectral modeling and, particularly for the aFXPs, location. Classification from spectral analysis was complicated by the overlapping distributions of spectral parameters among the different classes. We used the spatial distribution of source locations on the sky to verify our choice for the spectral hardness cut-off for the events assigned to the uGRB sample by verifying that the hardness cut-off maximized the isotropy of the spatial distribution.

The tXRBs are the primary science driver for this catalog and we discuss them in depth in Section 4.1. The distribution of temperatures from the blackbody spectral fits of the tXRBs is shown in Figure 10. The temperature distribution has a hard tail that extends beyond 6 keV prompting speculation that there was a fourth, unknown, category of XRBs. Monte Carlo analysis performed in Section 2.3 indicates that GBM has sufficient spectral sensitivity to accurately measure the spectral temperature down to 3 keV yet there are 62 tXRBs whose spectral temperature exceed 4.0 keV and none are associated with a known type I source. Furthermore, these events are distributed along the Galactic plane and concentrated at the Galactic center. A few are weak and may be explained by poor background subtraction while a few may be soft GRBs with chance location along the Galactic plane. We find no evidence of a bimodal distribution in spectral temperature or fluence thus we conclude that a fourth 'unknown' category is unwarranted with the current data set. We will revisit this when more data has been analyzed.

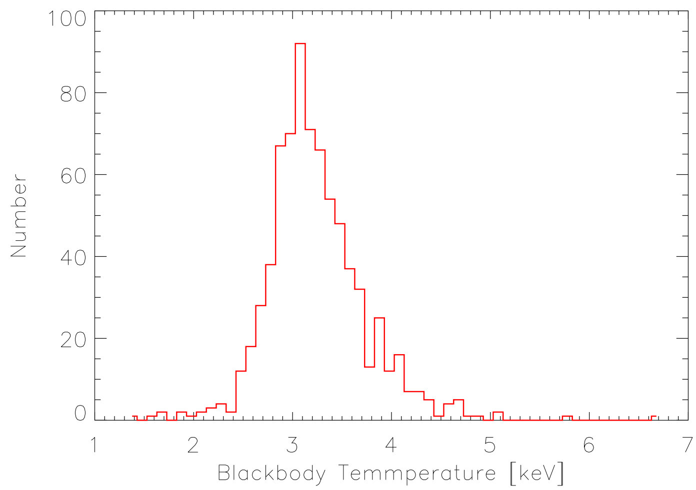


Fig. 10.— The figure shows the distribution of blackbody temperatures for the tXRBs. The distribution is not symmetric and has a hard tail that extends to 6 keV.

The aFXPs were a byproduct of our XRB search since we have dedicated programs to study them (The GBM Pulsar Project[2] and The Earth Occultation Project[3]). Nevertheless; the aFXPs in the catalog provide a unique opportunity to observe these sources in rare, bright states that would normally require a targeted observation.

The brightest (other than the Sun) recurring source GBM observes from 8-50 keV is Sco X-1 and we intentionally attempted to avoid this source since our focus was on tXRBs, nevertheless; Sco X-1 dominates the aFXP category due to its numerous flares. Its persistent nature makes background subtraction difficult and this occasionally leads to poor localization. Luckily, its soft spectrum (index ~ -3.5) makes this source relatively easy to identify. The other aFXPs are magnetically dominated accretion powered neutron stars with a harder spectrum (index ~ -2). Again, none of the aFXPs were intentionally targeted by our efforts but bright pulsations from these sources occasionally mimic XRBs in the 12-25 keV band and only careful follow-up review of these events reveal the train of pulses that help identify these sources.

[2]http://gammaray.msfc.nasa.gov/gbm/science/pulsars.html

[3]http://heastro.phys.lsu.edu/gbm

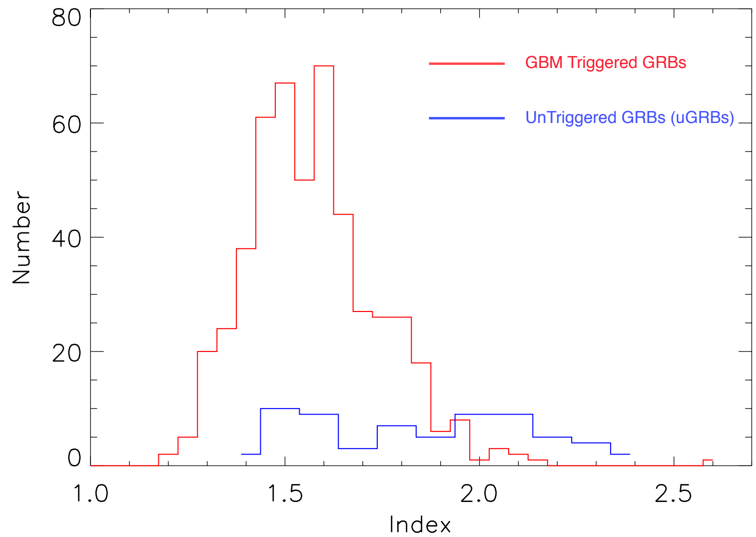


Fig. 11.— The red curve shows the histogram of the spectral index of comparable GBM triggered long GRBs while the blue curve is the histogram of the spectral index of the uGRBs in the XRB catalog

The uGRBs are either GBM sub-threshold trigger events or events which occur when triggering is disabled (rare occurrence). The sub-threshold events are an interesting population of GRBs which might include intrinsically weak, distant, or off-axis GRBs whose detection has consequences for population synthesis studies and future gravitational wave experiments optimized to detect rotating collapsars (Ott et al. 2011) and will be explored in future work. Figure 11 shows the spectral index distribution (in red) of the GBM triggered GRBs during the XRB catalog period whose duration (T90) is greater than four seconds. Overlaid (in blue) on the triggered distribution are the uGRB's spectral index distribution. It is reasonable from the figure to claim that most of the uGRBs are a sub-threshold continuation of the the triggered GRB population.

4.1. GBM's view on thermonuclear bursts

With an instantaneous FoV covering 75% of the sky, GBM offers an unprecedented coverage of most Galactic bursters. Due to its sensitivity at energies above ∼8 keV, GBM detects only the hottest phases of the hottest type I X-ray bursts: the touch-down phase of PRE bursts (as shown quantitatively in the simulations presented in Linares et al. (2012)) Thus our GBM X-ray burst monitor is a "PRE burst monitor" with an excellent observing duty cycle (50%, only interrupted by Earth occultations and SAA passages).

Figure 14 shows a histogram of energy flux (10–100 keV) for the tXRBs from the blackbody spectral fits. The flux distribution was fit (χ^2 = 101/81 dof) with a gaussian with the centroid at 3.1×10^{-8} erg cm^{-2} s^{-1} and a standard deviation of 1.2×10^{-8} erg cm^{-2} s^{-1}. The faintest tXRB in the catalog has a flux of $(3.4\pm1.0)\times10^{-9}$ erg cm^{-2} s^{-1}, which gives an estimate of the absolute flux limit in our catalog. Due to the strongly variable X-ray background at 8–50 keV; however, the minimum detectable flux can vary strongly.

PRE bursts reach the Eddington limit, which for a 1.4 $M_\odot$ neutron star is in the range $[1.6\text{–}3.8]\times10^{38}$ erg s^{-1} (depending of the radius and composition of the photosphere; see, e.g., Lewin et al. 1993; Kuulkers et al. 2003). In order to test if the flux distribution is consistent with thermonuclear bursts from the Galactic bulge, we adopt a fiducial Eddington luminosity of L_{Edd}=2.5×10^{38} erg s^{-1}, and show in Figure 14 the 10–100 keV fluxes corresponding to L_{Edd} at a distance of 8 kpc and 10 kpc (horizontal lines labelled $L_{Edd,8}$ and $L_{Edd,10}$ and). At least three factors contribute to the observed flux scatter: i) bursters have a range of distances, ii) different systems can have different L_{Edd} (due to differences in neutron star mass, radius or photospheric composition), and iii) even in a given burster the peak luminosity of PRE bursts show significant scatter (Galloway et al. 2008).

We thus conclude, from the flux distribution shown in Figure 14, that our tXRB sample is consistent with a population of Eddington-limited PRE bursts coming from a mix of bursters around the Galactic bulge region. Moreover, because only a handful of tXRBs have fluxes lower than that corresponding to an Eddington-limited burst at 10 kpc (yet several known bursters are farther than that), we estimate that our catalog is limited to PRE bursts occurring within $\sim$10 kpc. The fluence distribution, on the other hand, shows that for an assumed distance of 8 kpc, most bursts have energies between 10^{39} erg and 10^{40} erg (see horizontal lines labelled E39 and E40 in Fig. 14), although the range of fluences is wide with about two orders of magnitude. The duration of the tXRBs in the GBM band also spans a wide range, between $\sim$5 s and $\sim$500 s. The observed distributions of fluence and duration are not bimodal, both in the full tXRB sample and in the two low-$\dot{m}$ bursters presented in Sections 4.1.1 and 4.1.2. This indicates that the longest and most energetic thermonuclear bursts, sometimes referred to as “intermediate/long bursts”, are an extreme case of normal burst ignition.

We use hereafter a bolometric correction factor of f_{bolo}=1.9 to convert from 10–100 keV to bolometric burst flux and fluence, which we derive using a typical kT_{bb}=3 keV spectrum. Moreover, due to the high background rate and lack of sensitivity below 8 keV, GBM only detects the peak of tXRBs, where the temperature is highest. To take this into account (i.e., to include an estimate of the energy radiated during the burst tail), we use a “band correction factor” of f_{band}=1.3 to convert from GBM fluences (8–50 keV) to a more standard

(2–50 keV) energy band. This band correction was calculated by Linares et al. (2012) using simulated GBM lightcurves of bursts observed with the RXTE-PCA.

Table 2: GBM bursts with associated bursters

Burster	Nr.Bursts	D(kpc)	L(10^{38} erg/s)	E(10^{39} erg)	dur(s)	rise(s)	<kT>(keV)
4U 0614+09	33	3.2[a]	0.3-1.7	0.4-6.1	6.0-51.3	1.2-8.6	3.2
2S 0918-549	10	5.0[b]	0.7-1.7	1.0-17.0	9.7-75.6	2.5-38.9	3.1
SAX J1818.7+1424	4	9.4[c]	2.2-4.3	8.8-25.7	20.1-90.9	13.5-62.0	3.5
UW Crb	2	5[d]	1.0-1.0	1.4-1.8	10.6-13.7	2.4-4.9	3.2
IGR J17062-6143	2	5[e]	0.9-1.0	2.0-2.6	16.0-22.0	6.9-10.2	3.6
XB 1940-04	1	8[f]	4.4-4.4	28.9-28.9	50.1-50.1	11.8-11.8	3.9
Ser X-1	1	8.4[g]	2.8-2.8	19.4-19.4	52.6-52.6	39.9-39.9	3.1
MAXI J1421-613	1	7[h]	2.0-2.0	13.8-13.8	53.9-53.9	2.3-2.3	4.8

[a](Kuulkers et al. 2010)

[b](in't Zand 2005) 4.0-5.3 kpc

[c](Cornelisse et al. 2002b) <9.4 kpc

[d](Hakala et al. 2005) >5-7 kpc

[e](Degenaar et al. 2013)

[f](Murakami et al. 1983) unknown distance

[g](Cornelisse et al. 2002a) 7.7-10.0 kpc

[h](Serino et al. 2015) <7 kpc

4.1.1. 4U 0614+09

The burster and UCXB candidate 4U 0614+09 has been extensively studied by most X-ray missions, and is known to accrete persistently at a rate close to 1% of the Eddington limit. Due to its location far from other bursters and its proximity (Kuulkers et al. 2010 measured a distance of d=3.2 kpc, which we adopt in this work), it is an ideal source to study thermonuclear bursts at low accretion rates. During the first year of the Fermi-GBM X-ray burst monitor we detected 15 bursts from 4U 0614+09 (Linares et al. 2012).

Our three year catalog includes 33 tXRBs from 4U 0614+09 detected by GBM between March 2010 and March 2013. This is the same number of bursts detected from 4U 0614+09 with 9 different instruments over the course of 15 years (1992–2007, Kuulkers et al. 2010), which shows the drastic improvement in detection efficiency gained by GBM. Given GBM's 50% observing duty cycle, we measure a burst recurrence time of t_{rec}=17±2 d (1σ Poissonian uncertainty), 5 d longer than, but consistent with, the results of Linares et al. (2012). The closest burst pair we find is only 1.4 d apart, on 2012-06-18/20, the shortest wait time between thermonuclear bursts measured from this source to date. The bolometric and band-corrected burst energies from 4U 0614+09 span more than an order of magnitude, between [0.4–6.1]$\times 10^{39}$ erg, and show no evidence of bimodality, as shown in Table 2 and Figure 12.

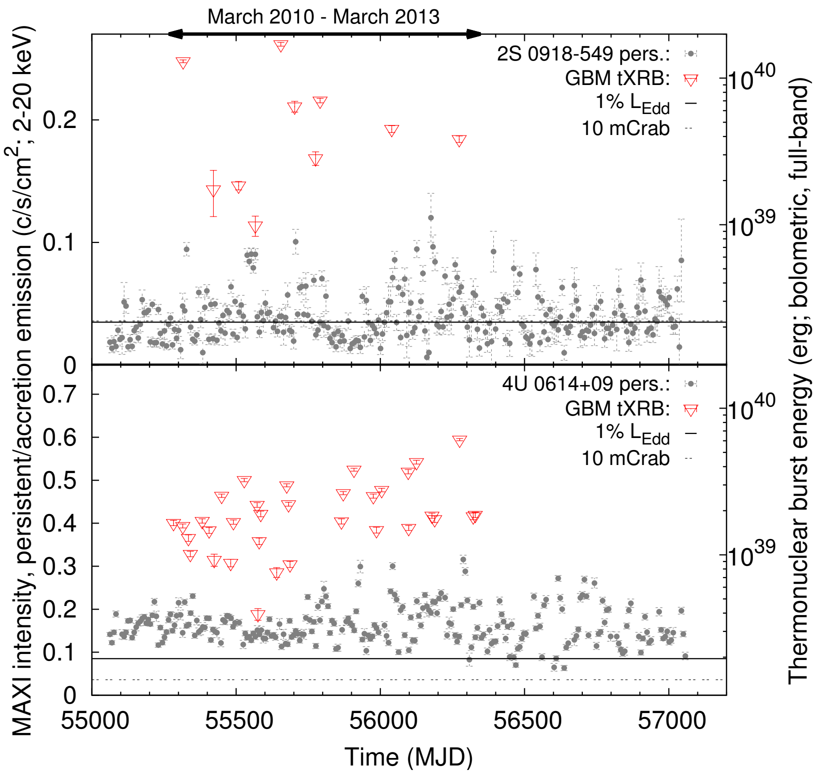


Fig. 12.— Red triangles show the time and radiated energy (right axis scale, band-corrected; see text) of the tXRBs from 4U 0614+09 *(bottom)* and 2S 0918-549 *(top)* detected by GBM during the period covered by this catalog (shown with the black arrow). The X-ray intensity is shown in the same panels (gray small circles, left axis), tracing the mass accretion rate history of each burster. The solid and dashed horizontal lines show the corresponding 1% L_{Edd} and 10 mCrab levels, respectively.

4.1.2. 2S 0918-549

Before our GBM campaign, 7 thermonuclear bursts had been reported from the UCXB candidate 2S 0918-549, between 1996 and 2004 (in't Zand 2005, we use the same distance of d=5 kpc throughout this work). This burster is analogous to 4U 0614+09 in many ways:

both are candidate UCXBs persistently accreting at a very low rate, and without detected hydrogen or helium lines in the optical spectrum (Nelemans et al. 2004). The inferred mass accretion rate in 2S 0918-549 is about two times lower, ∼0.5% of the Eddington limit (see Figure 12). In three years, we detect 10 tXRBs from 2S 0918-549, yielding a recurrence time of t_{rec}=56±12 d. The closest pair of bursts was detected in August 2011, only ∼16 d apart.

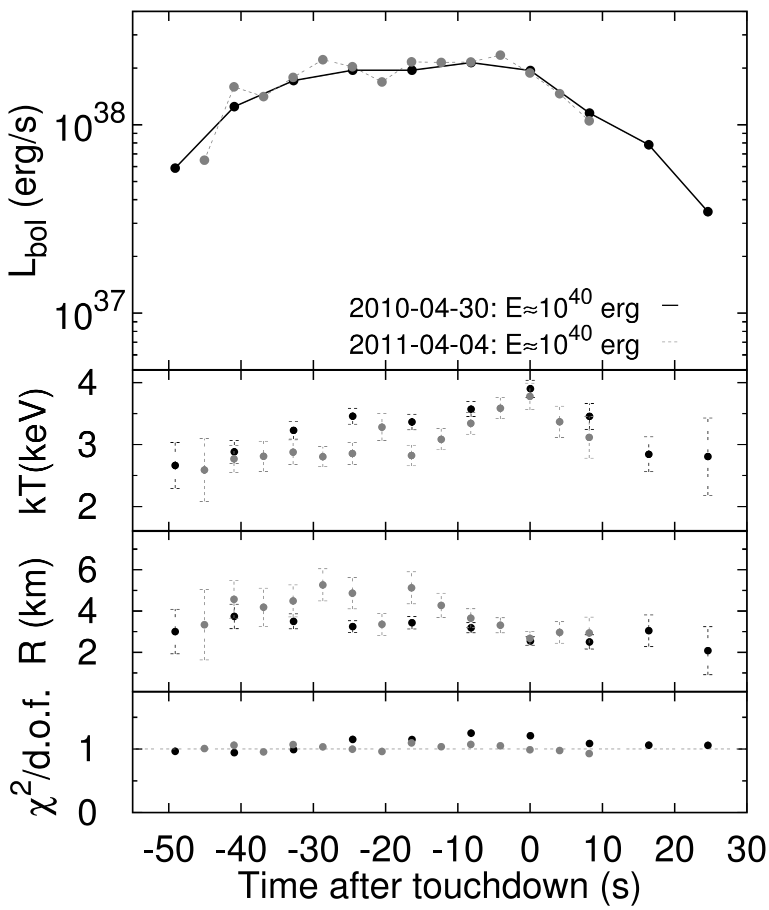


Fig. 13.— Luminosity and spectral evolution of the two most energetic bursts from 2S 0918-549, from top to bottom panels: bolometric luminosity, blackbody temperature, apparent emmiting radius and reduced chi squared. The maximum temperature and highest signal-to-noise in the GBM detectors coincides with the so-called "touch-down", when the neutron star photosphere is thought to reach the surface after expanding and contracting.

Two of the bursts, shown in Figure 13 are consistent with the so-called "long bursts" (in't Zand 2005; Cumming et al. 2006; Chenevez et al. 2008). These were detected on 2010-04-30 and 2011-04-04, with durations in the GBM band of 66 s and 76 s, respectively. They have energies above 10^{40} erg and their duration in the full 2–50 keV band is likely more than ten times longer than that in the GBM band, i.e., several tens of minutes (the band-corrected duration is more uncertain than the total energy, see Linares et al. 2012, for an estimate). Both the burst durations and energies show a continuous distribution in the range [10–76] s and [0.1–1.7]$\times 10^{40}$ erg, respectively (energies are bolometric and band-corrected, see Sec.3.1).

4.1.3. Other bursters and the integrated Galactic tXRB sample

The remaining associations, 11 tXRBs detected from the direction of six other bursters, are presented in Table 2. Some of these events are faint and have large location errors (Table 5), which together with the low number of tXRBs per burster makes the association uncertain. These include: i) four events from the direction of SAX J1818.7+1424 (detected on 2010-07-01, 2010-07-11, 2010-10-02 and 2011-01-28); ii) two events from the direction of the high Galactic latitude burster UW Crb (on 2011-11-03 and 2011-12-31) and two from the direction of IGR J17062-6143 (on 2010-07-19 and 2011-04-29); iii) one event associated to XB 1940-04 (2011-10-20), one to Ser X-1 (2010-05-31), and one tXRB from the direction of MAXI J1421-613 (on 2011-10-16; note that this source was discovered in outburst in January 2014).

It is also worth discussing which bursters are *missing* from the association list. Most notoriously, we do not detect any tXRB from 4U 1246–58 in our three-year catalog. In a study of this burster and UCXB candidate accreting persistently below 1% of the Eddington rate, in't Zand et al. (2008) found 7 PRE bursts, all but two with long durations, and a distance of 4.3 kpc. The corresponding burst rate between 1996 and 2008 was 12±6 d (in't Zand et al. 2007). In contrast, our non-detection of GBM bursts from 4U 1246–58 between 2010 and 2013 implies a 95% lower limit on the recurrence time t_{rec}>186 d, significantly longer than that measured by in't Zand et al. (2007). Thus our results suggest that a drastic change in the burst properties of this burster took place between 2008 and 2010, which might be linked to the long-term decay of its persistent emission already noted in in't Zand et al. (2008).

Two other UCXB bursters are probably too distant to be detected with the GBM X-ray burst monitor: 4U 0513-40 (8.2–11 kpc according to Galloway et al. 2008) and 4U 2129+12 (X-2 in M15, 10.4 kpc away according to Harris 1996). 4U 1915-05 is also close to our detection limit (6.8–8.9 kpc according to Galloway et al. 2008) and is a high inclination "dipper" UCXB, which may explain why no bursts are detected by GBM in the present catalog. The rest of UCXBs and low mass accretion rate bursters are too close to the extended Galactic bulge region to be resolved by GBM, but are included in the total Galactic rate measured and discussed below.

We show in Figure 14 the distribution of blackbody temperature, flux, fluence and duration, in the full sample of tXRBs. The vast majority of tXRBs come from the Galactic "extended bulge" region (489 locate to within 30° of Sag-A). Fluence and duration are clearly correlated, showing that the most energetic thermonuclear bursts are also the longest, as expected given the physical (Eddington) limit on the burst luminosity.

The total of 752 tXRBs detected in our three-year catalog, correcting for the 50% observing duty cycle, implies a total rate of 1.37±0.04 thermonuclear bursts per day (1-σ Poissonian uncertainty). This represents the average over three years of all bursters within the reach of the GBM X-ray burst monitor, which we estimate below corresponds to distances $\lesssim$10 kpc (Section 4). Due to GBM's broad sky coverage, this constitutes an unprecedented measurement of the total Galactic thermonuclear burst rate, which we discuss in Section 4.

On average, the GBM bursts in 2S 0918-549 (t_{rec}=56±12 d; $<E>=6\times10^{39}$ erg) are more energetic and less frequent than those from 4U 0614+09 (t_{rec}=17±2 d; $<E>=2\times10^{39}$ erg). This is qualitatively explained by ignition models, given that 2S 0918-549 accretes at a rate about two times lower than 4U 0614+09 (Cumming et al. 2006). Lower $\dot{m}$ implies a colder neutron star envelope, a longer fuel accumulation time and a higher ignition depth. However, ignition models still have problems to reproduce quantitatively these recurrence times and burst energies (Kuulkers et al. 2010; Linares et al. 2012). Assuming Solar metallicity, the pure helium ignition models from Cumming and Bildsten (2000) require large amounts of deep crustal heating to reproduce the recurrence times that we measure in 2S 0918-549 and 4U 0614+09: more than 3 MeV per accreted nucleon (see Figure 7 and further discussion in Linares et al. 2012). Having two low-$\dot{m}$ bursters with robust GBM measurements of recurrence times, we can place the first meaningful constraints on the t_{rec}–$\dot{m}$ relation at $\dot{m}/\dot{m}_{Edd} \sim 1\%$. The measured t_{rec} and $\dot{m}$ in 2S 0918-549 and 4U 0614+09 are not consistent with a linear relation, and suggest a steeper $t_{rec} \propto \dot{m}^{[1.7-1.8]}$ relation.

We find a total Galactic rate of 1.4 PRE bursts per day, out to about 10 kpc from the Sun and averaged over the three years of our catalog (Section 4.1.3). During PRE bursts the neutron star atmosphere can be pushed by radiation forces up to hundreds or thousands of kilometers above the surface, and small but significant amounts of nuclear burning ashes may be ejected (Weinberg et al. 2006). To conclude, we roughly estimate the total mass ejected by the PRE bursts uncovered by GBM, by adding their bolometric- and band-corrected fluences and assuming they are all at 8 kpc (see Sec. 3.1 and discussion above). This yields a total radiated energy of 8×10^{42} erg, 1.6×10^{43} erg after correcting for the 50% observing duty cycle. For a nuclear energy release of 1.6–4.4 MeV per nucleon, this translates into $[4–11]\times10^{24}$ gr of burned fuel. For a fraction of ejected mass of 10^{-4}–10^{-2} Weinberg et al.

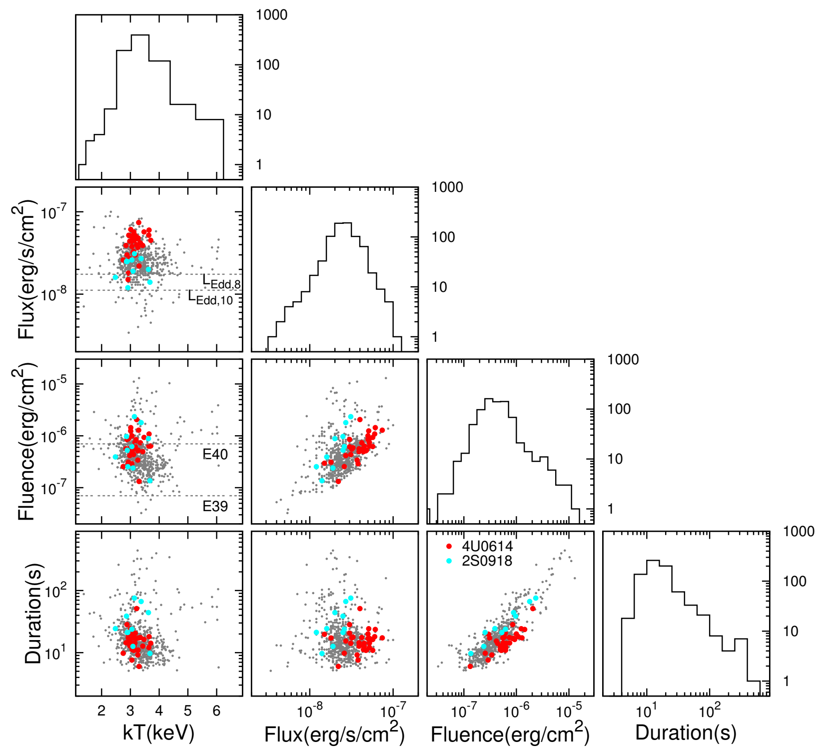


Fig. 14.— Temperature, flux (10–100 keV), fluence (10–100 keV) and duration distribution of the full tXRB sample, as measured by GBM. The bursts from 4U 0614+09 and 2S 0918-549 are shown in red and blue, respectively. Horizontal dashed lines show, for comparison and from top to bottom: GBM flux corresponding to an Eddington luminosity L_{Edd}=2.5×10^{38} erg s^{-1} at a distance of 8 kpc; GBM fluence corresponding to a bolometric energy of 10^{40} and 10^{39} erg at 8kpc. Histograms of all four parameters are also shown.

(2006), this implies a total of [4×10^{20}–10^{23} gr] ejected during three years. With the above assumptions, we are able to place direct observational constraints on the amount of mass ejected into the interstellar medium by PRE bursts in our Galaxy (within 10 kpc of the Sun): 10^{-13}–10^{-11} $M_\odot$ yr^{-1}. Whether or not this contributes significantly to the Galactic abundances of any elements (proton-rich isotopes have received particular attention in the context of thermonuclear bursts; see Weinberg et al. 2006, and references therein), remains a subject for future studies.

Acknowledgements

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- This research has made use of the MAXI data provided by RIKEN, JAXA and the MAXI team.

Table 3:: GBM Accretion Powered Events

ID	Peak s	Ra degrees	Dec degrees	Error degrees	Association
10033115145	01656753	237.6	-19.0	6.6	ScoX-1
10033122117	01663724	253.6	-10.7	6.4	Sco X-1
10041602529	03026531	239.0	-19.0	1.1	ScoX-1
10041602579	03026532	240.2	-12.1	1.6	ScoX-1
10041602801	03026803	250.2	-21.8	2.1	ScoX-1
10041610060	03034062	245.7	-13.8	2.1	Sco X-1
10041610234	03034236	245.7	-18.5	6.1	Sco X-1
10042668136	03956138	246.9	-12.1	4.0	ScoX-1
10042684127	03972145	248.2	-25.8	3.2	ScoX-1
10051456430	05499632	245.2	-16.0	5.0	Sco X-1
10051644231	05660233	249.9	-4.6	4.2	Sco X-1
10052213157	06147420	244.8	-21.4	1.9	ScoX-1
10052218183	06152598	232.6	-17.1	2.0	ScoX-1
10060237774	07122576	239.8	-17.6	4.5	ScoX-1
10060465574	07323177	244.4	-18.3	2.9	Sco X-1
10061439954	08161556	253.0	-19.5	3.6	ScoX-1
10061538029	08246031	245.4	-19.6	7.7	ScoX-1
10062200104	08812906	129.4	-47.5	13.8	VelaX-1
10062820324	09351541	168.1	-61.9	6.2	GX 301-2
10070233600	-	255.6	19.9	7.9	ScoX-1
10071614574	10900977	149.1	-45.8	17.2	VelaX-1
10071614633	10901035	180.0	-70.6	1.7	GX301-2
10071644045	10930444	240.6	-16.6	1.5	ScoX-1
10072224159	11428961	248.6	-14.1	6.6	ScoX-1
10072266106	11470908	245.9	-13.6	1.2	ScoX-1
10072280879	11485681	224.8	-20.0	10.8	ScoX-1
10072468369	11645971	251.1	-17.7	1.0	ScoX-1
10072476948	11654550	226.8	-7.7	8.5	ScoX-1
10072477354	11654953	249.9	-7.1	3.3	ScoX-1
10072528476	11692478	238.1	-21.2	2.9	ScoX-1
10081808487	13746089	256.9	-33.6	13.8	ScoX-1
10082043388	13953819	246.0	-17.8	2.6	ScoX-1
10082313670	14183272	248.4	-15.0	2.0	ScoX-1
10082314586	14184189	240.5	-12.9	5.4	ScoX-1
10082858304	14659906	253.7	-4.0	6.1	ScoX-1
10083111073	14871875	236.6	-13.3	4.8	ScoX-1
10083138505	14899307	245.1	-14.9	4.2	ScoX-1
10090701973	15467575	137.4	-39.1	13.1	VelaX-1
10091451311	16121713	248.7	-12.8	3.8	ScoX-1
10091614419	16257621	244.2	-13.1	3.1	ScoX-1
10091614545	16257747	242.3	-24.4	2.6	ScoX-1
10091833221	16449223	249.7	-21.9	3.5	ScoX-1
10091845340	16461331	248.7	-15.5	5.2	ScoX-1
10091950467	16552864	268.5	-10.7	5.2	ScoX-1
10091962088	16564490	254.8	-19.2	5.0	ScoX-1
10092002644	16591447	144.7	-41.0	2.3	VelaX-1
10092236271	16797869	234.2	-17.7	6.5	ScoX-1
10092269394	16830997	248.0	-3.4	7.3	ScoX-1
10092282005	16843607	234.4	-16.1	3.4	ScoX-1
10092282489	16844084	246.5	-13.1	2.2	ScoX-1
10092340871	16888874	274.1	-10.6	11.6	ScoX-1
10092451782	16986185	109.4	-32.7	13.1	VelaX-1
10092565936	17086738	141.6	-40.6	6.7	VelaX-1
10092623999	17131202	243.8	-12.0	2.2	ScoX-1
10092753639	17247242	134.8	-55.7	8.5	VelaX-1
10100482935	17881338	238.4	-14.3	6.4	ScoX-1
10100507171	17891973	242.4	-17.7	5.9	ScoX-1
10100548695	17933498	245.9	-21.1	3.3	ScoX-1
10100565184	17949987	251.7	-5.4	6.3	ScoX-1
10100629742	18000944	254.4	-14.1	12.5	ScoX-1
10100629958	18001160	242.1	-5.8	8.4	ScoX-1
10100642300	18013503	239.7	-19.4	3.4	ScoX-1
10100722670	18080272	133.1	-31.5	9.2	VelaX-1
10100736278	18093880	133.3	-35.8	1.1	VelaX-1
10100841167	18185170	144.8	-36.1	5.4	VelaX-1
10100981367	18311770	151.5	-53.0	14.2	GX 301-2
10101606400	18841603	238.9	-23.6	3.1	ScoX-1
10101633706	18868908	243.6	-13.3	4.3	ScoX-1
10103004298	20049100	246.2	-16.3	3.0	ScoX-1
10110554438	20617646	244.9	-16.6	1.1	ScoX-1
10111206222	21174224	242.5	-10.0	5.0	Sco X-1
10111349861	21304264	128.5	-54.4	11.9	Vela X-1
10111373491	21327893	140.1	-40.3	9.0	Vela X-1
10112917548	22654350	246.0	-11.0	2.2	ScoX-1
10120155195	22864797	130.1	-46.2	4.6	VelaX-1

Table 3:: GBM Accretion Powered Events (continued from previous page)

ID	Peak s	Ra degrees	Dec degrees	Error degrees	Association
10120524820	23180022	239.0	-14.6	3.6	ScoX-1
10121111024	23684626	228.8	-21.4	7.8	ScoX-1
10121310842	23857247	247.4	-16.3	2.1	ScoX-1
10121312945	23859347	245.1	-19.0	3.1	ScoX-1
10121317896	23864294	147.6	-53.6	6.4	Vela X-1
10121361953	23908355	245.1	-20.4	2.4	Sco X-1
10121406696	23939498	242.3	-17.3	2.9	Sco X-1
10121411613	23944416	243.8	-23.5	2.7	Sco X-1
10121428705	23961507	239.3	-14.7	2.3	ScoX-1
10121435822	23968624	244.8	-16.0	4.4	Sco X-1
10121481202	24014004	243.5	-13.7	1.6	Sco X-1
10121662433	24168035	243.4	-16.1	4.2	Sco X-1
10121666342	24171944	242.1	-19.4	4.5	Sco X-1
10121772298	24264301	241.1	-13.9	2.9	Sco X-1
10121783224	24275226	246.3	-12.3	5.9	Sco X-1
10121783581	24275584	246.9	-15.4	3.2	Sco X-1
10121856716	24335118	242.4	-14.8	1.7	ScoX-1
10121861774	24340176	239.7	-18.5	3.7	Sco X-1
10122045130	24496332	252.9	-15.6	2.4	Sco X-1
10122053642	24504844	248.9	-15.2	3.0	Sco X-1
10122067452	24518655	245.2	-12.0	4.7	Sco X-1
10122079265	24530467	244.2	-25.4	4.7	Sco X-1
10122079568	24530771	248.0	-14.4	4.0	Sco X-1
10122108793	24546414	241.7	-16.2	2.6	ScoX-1
10122109310	24546912	227.9	-16.1	5.8	Sco X-1
10122110025	24547627	244.3	-15.1	3.6	ScoX-1
10122159600	24597202	247.1	-16.3	3.3	Sco X-1
10122170751	24608364	244.9	-14.6	5.6	ScoX-1
10122253216	24677229	240.8	-17.0	2.0	ScoX-1
11010913728	26192930	245.6	-18.3	2.8	Sco X-1
11010920230	26199433	251.5	-13.6	6.2	Sco X-1
11011204878	26443281	248.0	-18.9	3.0	Sco X-1
11011219762	26458164	252.4	-19.8	5.9	Sco X-1
11011240860	26479262	241.1	-16.7	2.4	Sco X-1
11011333896	26558699	238.0	-17.5	2.3	Sco X-1
11011358000	26582802	245.8	-16.6	7.1	ScoX-1
11011512584	26710186	241.7	-10.0	2.5	Sco X-1
11013026166	-	140.7	-62.7	10.3	Sco X-1
11020145976	28212378	253.2	-22.4	4.7	ScoX-1
11020255377	28308180	240.3	-17.5	4.7	Sco X-1
11020316481	28355684	248.8	-18.1	4.4	Sco X-1
11020360169	28399371	255.6	4.4	8.8	Sco X-1
11020367714	28406916	225.6	-15.1	2.8	VelaX-1
11020461574	-	224.6	-9.7	1.3	ScoX-1
11020665284	28663686	127.9	-47.0	6.3	VelaX-1
11020981064	28938650	243.1	-13.0	7.5	ScoX-1
11021213389	29130191	239.1	-14.1	2.2	Sco X-1
11021441319	29330924	240.7	-21.4	24.8	ScoX-1
11021462117	29351719	247.4	-3.5	9.3	Sco X-1
11021537226	29413229	211.0	-51.5	2.8	A 0535+26
11021771436	29620239	252.0	-18.4	3.2	Sco X-1
11021772999	29621801	223.2	-11.6	7.5	Sco X-1
11021778130	29626933	87.5	21.2	4.1	A 0535+26
11021803454	-	243.8	-14.5	7.3	ScoX-1
11022013794	29821797	82.3	30.5	6.4	A 0535+26
11022017627	29825629	92.1	23.8	9.1	A 0535+26
11022024940	29832942	80.7	23.5	7.0	A 0535+26
11022600056	30326458	84.3	28.9	6.8	A 0535+26
11022602571	30328965	247.2	-14.0	6.3	ScoX-1
11022610994	30337396	77.3	27.5	2.6	A 0535+26
11022644774	30371176	89.0	29.9	5.8	A 0535+26
11022651107	30377509	246.0	-12.6	4.5	Sco X-1
11022662821	30389223	241.3	-18.4	2.6	Sco X-1
11022705663	30418465	84.0	25.1	5.4	A 0535+26
11022734635	30447438	234.4	-17.0	3.3	ScoX-1
11022740167	30452969	96.1	27.8	4.9	A 0535+26
11022751213	30464015	84.2	22.6	3.3	A 0535+26
11022803168	30502371	89.1	21.7	6.8	A 0535+26
11022803180	30502382	87.8	23.3	6.0	A 0535+26
11022803186	30502383	83.4	25.6	8.9	A 0535+26
11022809694	30508897	94.7	27.5	20.0	A 0535+26
11022821513	30520715	82.3	19.1	4.7	A 0535+26
11022867049	30566251	90.1	28.9	3.1	A 0535+26
11030101205	30586807	251.3	-6.2	4.2	Sco X-1
11030173543	30659145	85.7	25.2	4.4	A 0535+26

Table 3:: GBM Accretion Powered Events (continued from previous page)

ID	Peak s	Ra degrees	Dec degrees	Error degrees	Association
11030179508	30665111	242.4	-19.8	2.6	Sco X-1
11030181519	30667121	243.5	-10.6	2.0	Sco X-1
11030205018	30677020	235.4	1.8	11.6	Sco X-1
11030215270	30687273	248.0	-5.0	2.7	ScoX-1
11030218823	30690825	239.2	-31.0	2.9	ScoX-1
11030220961	30692963	81.7	28.0	6.8	A 0535+26
11030274909	30746911	241.9	-14.0	1.2	Sco X-1
11030311905	30770307	240.6	-7.5	3.8	Sco X-1
11030323917	30782319	133.0	-34.1	7.8	Vela X-1
11030342788	30801190	81.1	32.7	5.7	A 0535+26
11030348871	30807273	82.3	16.6	8.3	A 0535+26
11030383047	30841450	98.2	13.8	21.3	A 0535+26
11030408722	30853548	81.3	25.5	2.9	A 0535+26
11030448088	30892890	81.9	20.8	8.0	A 0535+26
11031382048	31704450	239.1	-21.2	5.8	Sco X-1
11033057363	33148565	135.1	-61.1	20.8	VelaX-1
11042652025	35476028	242.0	-30.0	3.0	ScoX-1
11042652314	35476316	267.3	-8.3	6.4	Sco X-1
11042652484	35476486	247.6	-4.2	3.2	ScoX-1
11042841815	35638617	246.4	-15.3	4.9	ScoX-1
11042869962	35666764	237.7	-24.4	8.5	ScoX-1
11042871462	35668264	236.2	-11.7	6.6	ScoX-1
11050379535	36108337	133.8	-49.4	2.7	VelaX-1
11050748517	36422919	241.4	-13.2	5.0	ScoX-1
11050847498	36508301	249.4	-22.0	3.1	ScoX-1
11051129424	36749427	247.9	-11.7	2.9	ScoX-1
11051135466	36755469	247.5	-10.2	6.4	ScoX-1
11051157743	36777745	245.7	-19.0	2.1	ScoX-1
11051248887	36855289	244.3	-16.2	1.8	ScoX-1
11051270190	36876616	247.3	-15.5	3.0	ScoX-1
11051342842	36935644	239.1	-9.8	1.8	ScoX-1
11052301263	37758066	244.1	-27.1	3.3	ScoX-1
11060753139	39105941	139.8	-41.4	3.0	VelaX-1
11060847684	39186871	247.6	-18.2	2.1	ScoX-1
11061006652	39318654	245.1	-17.2	2.2	ScoX-1
11061200969	39485771	244.9	-15.7	3.5	ScoX-1
11061861410	40064613	242.5	-39.0	7.8	ScoX-1
11062071061	40247063	131.9	-42.6	1.9	VelaX-1
11062165368	40327771	132.5	-36.8	4.0	VelaX-1
11062300765	40435968	248.2	-19.6	21.5	ScoX-1
11070525196	41497199	136.0	-43.9	4.9	VelaX-1
11070667454	41625872	254.4	-17.7	5.1	ScoX-1
11070672799	-	260.9	-12.2	6.9	ScoX-1
11070713658	41658460	235.7	-18.0	4.1	ScoX-1
11070841776	41772978	240.8	-18.4	6.4	ScoX-1
11073150555	43768952	248.6	-9.0	2.0	ScoX-1
11082026427	45472829	239.2	-10.6	2.8	ScoX-1
11082448227	45840241	251.9	-13.2	2.1	ScoX-1
11082711166	46062369	142.1	-49.2	5.4	VelaX-1
11090313504	46669507	256.4	-17.9	4.2	ScoX-1
11090314799	46670801	243.5	-23.0	2.7	ScoX-1
11091300793	47520795	243.7	-15.4	3.4	ScoX-1
11091463462	47669864	255.3	-6.7	6.3	ScoX-1
11092200824	48298426	257.4	-31.5	3.5	ScoX-1
11100214657	49176253	243.5	-13.1	2.0	ScoX-1
11100215761	49177363	242.6	-17.1	3.6	ScoX-1
11100230702	49192304	229.9	-15.0	5.4	ScoX-1
11100232599	-	243.0	-8.5	2.6	ScoX-1
11100242670	49204272	250.2	-20.8	1.0	ScoX-1
11100244189	49205791	232.5	-4.7	6.0	ScoX-1
11100268246	49229849	240.9	-23.9	3.3	ScoX-1
11101636463	50407665	256.3	-16.0	12.4	ScoX-1
11101636670	50407872	250.2	-2.0	7.4	ScoX-1
11101712910	50470512	239.6	-8.6	6.9	ScoX-1
11101802197	-	246.7	-9.6	9.0	ScoX-1
11101832878	50576880	250.3	-17.1	7.2	ScoX-1
11101833068	50577070	239.8	3.6	7.0	ScoX-1
11101833179	50577181	237.1	-4.3	3.7	ScoX-1
11101908312	50638714	253.1	-19.6	12.8	ScoX-1
11101909692	50640094	238.7	-28.4	9.4	ScoX-1
11101978676	50709079	242.2	-6.9	4.2	ScoX-1
11102078044	50794846	266.7	-6.4	19.6	ScoX-1
11102157353	50860556	158.0	-64.0	16.3	VelaX-1
11102909039	51503441	133.4	-50.5	6.2	VelaX-1
11102909327	51503729	143.0	-38.2	8.7	VelaX-1

Table 3:: GBM Accretion Powered Events (continued from previous page)

ID	Peak s	Ra degrees	Dec degrees	Error degrees	Association
11102978257	51572660	249.0	-6.5	2.8	ScoX-1
11103170079	51737281	227.2	-22.9	2.5	ScoX-1
11103178586	51745788	228.0	-19.7	1.7	ScoX-1
11110437755	52050557	234.7	-13.3	3.1	ScoX-1
11111232722	52736724	247.7	-8.2	2.0	ScoX-1
11111303703	52794105	150.4	-34.2	1.5	ScoX-1
11111304282	52794118	246.3	-20.2	2.1	ScoX-1
11111410647	52887698	250.6	-17.3	1.0	ScoX-1
11111432972	52909667	253.2	-16.4	2.0	ScoX-1
11111433027	52909768	246.1	-17.1	2.5	ScoX-1
11111625957	53075559	244.5	-17.0	3.9	ScoX-1
11111631676	53081277	234.7	-28.2	9.1	ScoX-1
11112357690	53712093	250.6	-14.2	6.1	ScoX-1
11120462617	54667419	134.9	-35.0	2.9	VelaX-1
11120505963	54697165	129.0	-43.8	8.0	VelaX-1
11120785503	54949505	131.3	-36.0	14.7	VelaX-1
11120933602	55070404	245.8	-14.4	3.7	ScoX-1
11121128322	55237924	248.0	-4.3	5.5	ScoX-1
11122861321	56739723	250.8	-11.9	3.4	ScoX-1
12012975965	59519167	272.0	-16.5	5.2	ScoX-1
12020914747	60408349	247.9	-6.4	7.0	ScoX-1
12052729734	69754537	240.9	-15.5	4.0	ScoX-1
12052801679	69812881	228.9	-10.3	10.3	ScoX-1
12052870492	69881695	235.6	2.3	7.3	ScoX-1
12071250340	73749543	248.9	-11.1	4.8	VelaX-1
12080904347	76122750	247.2	-23.2	10.6	ScoX-1
12082260763	77302365	233.1	-18.5	2.2	ScoX-1
12082941689	77888091	145.9	-43.1	4.9	VelaX-1
12091611473	79413076	242.2	-25.5	5.4	ScoX-1
12091715060	79503045	248.1	-12.0	3.2	ScoX-1
12091727300	79515302	248.3	-14.8	2.8	ScoX-1
12100530195	81073397	137.0	-40.0	3.0	VelaX-1
12100620316	81149918	139.7	-48.8	5.8	VelaX-1
12100818648	81321051	253.5	-16.0	3.0	ScoX-1
12110858521	84039323	137.3	-34.2	3.0	VelaX-1
12110883345	84064147	163.0	-54.4	1.5	VelaX-1
12112714160	85636573	243.0	-26.7	4.2	ScoX-1
12120774013	86560416	120.3	-51.9	27.6	VelaX-1
12122404206	87959408	247.2	-17.6	2.2	ScoX-1
12122851174	88351976	252.9	-37.2	6.4	ScoX-1
13010978715	89416317	253.2	-15.1	1.0	ScoX-1
13021437595	-	247.7	-12.1	4.6	ScoX-1

Table 4:: GBM Untriggered GRB Events

ID	Peak s	Ra	Dec	Error (sigma)	Epeak keV	Comp Flux $10-8$ erg cm^{-2} s^{-1}	Comp Flnc 10^{-7}erg cm^{-2}	PL Index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
10031206566	00006572	94.6	71.7	6.7	$48148.250000 \pm 7221517.$	7.17 ± 0.90	20.5 ± 2.5	-1.675 ± 0.064	7.82 ± 0.85	22.3 ± 2.4	9.38	10.67	21.34	S
10040364545	01965350	67.2	-13.4	9.8	$63.8 \pm 10.$	5.09 ± 0.56	14.5 ± 1.6	-1.577 ± 0.099	13.3 ± 2.6	38.2 ± 7.5	3.48	21.87	27.25	S
10041528253	02965835	261.6	47.8	2.1	24.2 ± 2.0	2.28 ± 0.23	17.7 ± 1.8	-2.17 ± 0.15	4.28 ± 0.96	33.2 ± 7.4	28.38	95.49	125.40	S
10041565751	03003352	272.7	-19.1	4.9	$92.0 \pm 12.$	7.99 ± 0.72	22.8 ± 2.0	-1.595 ± 0.057	15.3 ± 1.4	43.8 ± 4.2	7.65	9.79	19.38	S
10062847601	09378789	358.8	69.1	1.0	125.6 ± 7.0	15.91 ± 0.62	136.3 ± 5.3	-1.492 ± 0.020	28.55 ± 0.96	244.6 ± 8.2	24.75	63.99	101.82	S
10071023190	10391193	299.8	-45.0	12.5	69.9 ± 8.5	5.14 ± 0.47	10.50 ± 0.97	-1.725 ± 0.070	9.4 ± 1.0	19.3 ± 2.1	9.29	5.32	15.33	M
10071069939	10437939	89.9	-84.0	5.4	$62.6 \pm 11.$	3.94 ± 0.44	9.6 ± 1.0	-1.799 ± 0.075	6.94 ± 0.89	16.9 ± 2.1	5.52	8.74	14.66	M
10071369978	10697195	290.2	68.3	15.9	$46.5 \pm 15.$	3.46 ± 0.63	7.0 ± 1.3	-1.99 ± 0.12	5.18 ± 0.99	10.5 ± 2.0	14.30	7.95	23.36	M
10072541217	11705212	313.8	76.8	1.2	$112.7 \pm 18.$	13.3 ± 1.0	65.4 ± 5.3	-1.664 ± 0.033	21.6 ± 1.2	105.9 ± 6.1	17.89	23.18	42.92	M
10081624089	13588900	164.0	37.1	3.7	50.0 ± 4.9	6.12 ± 0.37	22.5 ± 1.3	-1.910 ± 0.042	10.11 ± 0.71	37.1 ± 2.6	25.64	22.73	50.41	M
10081718364	13669576	42.6	-22.7	12.9	33.9 ± 5.7	3.67 ± 0.52	4.49 ± 0.64	-1.94 ± 0.16	3.49 ± 0.37	4.27 ± 0.45	6.15	4.65	11.34	S
10090270542	15104128	41.6	26.4	6.6	$84.1 \pm 13.$	5.43 ± 0.46	33.2 ± 2.8	-1.626 ± 0.061	7.15 ± 0.74	43.8 ± 4.5	66.63	21.37	95.72	M
10092473690	17008073	184.4	45.0	7.4	$51.3 \pm 15.$	3.43 ± 0.50	19.6 ± 2.8	-1.990 ± 0.074	4.60 ± 0.54	26.2 ± 3.1	8.48	63.28	80.96	M
10092635620	17142829	248.4	26.9	9.4	$153.3 \pm 62.$	2.82 ± 0.66	23.0 ± 5.4	-1.497 ± 0.096	4.77 ± 0.71	38.9 ± 5.8	11.47	8.34	24.78	S
10092955416	17335410	50.5	-14.8	6.1	90.3 ± 6.8	7.80 ± 0.45	117.8 ± 6.8	-1.563 ± 0.037	14.86 ± 0.97	$224.3 \pm 14.$	71.76	82.78	164.98	S
10100209542	17635152	129.4	-37.7	7.8	$35.5 \pm 15.$	2.57 ± 0.77	2.10 ± 0.63	-1.95 ± 0.16	4.6 ± 1.2	3.8 ± 1.0	9.78	20.89	32.99	S
10100633055	18004249	318.7	50.5	3.4	24.4 ± 6.8	1.96 ± 0.24	16.0 ± 2.0	-2.10 ± 0.11	3.32 ± 0.53	27.1 ± 4.3	17.17	74.91	96.94	S
10110363335	20453744	238.3	-48.1	3.7	24.8 ± 2.0	1.90 ± 0.13	21.8 ± 1.5	-2.184 ± 0.097	3.43 ± 0.44	39.3 ± 5.1	60.81	57.27	123.74	S
10121121267	23694871	245.9	63.2	10.9	$49.3 \pm 20.$	4.2 ± 1.1	5.2 ± 1.3	-1.83 ± 0.11	3.33 ± 0.24	4.08 ± 0.30	1.97	7.45	11.18	S
11011903415	27046624	291.2	55.4	10.6	26.9 ± 2.8	1.53 ± 0.20	5.01 ± 0.65	-2.09 ± 0.16	2.92 ± 0.69	9.5 ± 2.2	9.94	19.61	37.98	S
11031264584	31600583	154.8	-5.5	7.8	29.5 ± 6.6	2.29 ± 0.34	11.2 ± 1.7	-1.97 ± 0.12	4.77 ± 0.98	23.4 ± 4.8	9.73	17.64	28.15	S
11031969722	32210533	259.2	45.6	9.9	46.8 ± 6.1	1.86 ± 0.26	6.84 ± 0.97	-1.64 ± 0.10	5.22 ± 0.96	19.2 ± 3.5	12.43	25.86	39.78	S
11041830315	34763063	122.2	30.1	13.5	$169.22 \pm 106.$	5.9 ± 1.7	13.0 ± 3.8	-1.576 ± 0.072	8.4 ± 1.1	27.6 ± 3.7	2.26	70.03	73.11	M
11051735845	37274237	282.6	-82.8	14.0	$50.2 \pm 13.$	8.3 ± 1.4	3.42 ± 0.60	-1.74 ± 0.10	19.3 ± 3.7	7.8 ± 1.5	1.05	5.72	7.06	S
11052339922	37796727	45.3	46.5	7.5	$134.7 \pm 35.$	6.39 ± 0.88	23.4 ± 3.2	-1.583 ± 0.057	10.3 ± 1.0	37.9 ± 3.6	14.09	16.41	32.16	S
11052552934	37982544	225.6	-17.1	7.5	$52.1 \pm 29.$	2.07 ± 0.55	13.5 ± 3.6	-2.10 ± 0.12	2.25 ± 0.36	18.3 ± 3.0	11.10	1.89	15.46	M
11062570170	40678179	270.5	-16.9	12.9	–	–	–	-2.22 ± 0.17	1.69 ± 0.25	2.76 ± 0.42	1.98	11.61	15.04	S
11070345736	41344937	221.6	-26.0	13.7	$136.2 \pm 42.$	16.4 ± 2.3	11.7 ± 1.7	-1.631 ± 0.057	25.3 ± 2.3	18.1 ± 1.6	1.79	3.92	6.06	S
11081315909	44857521	129.8	-44.8	4.3	26.9 ± 2.7	2.68 ± 0.28	3.28 ± 0.34	-2.01 ± 0.15	2.80 ± 0.28	3.44 ± 0.35	44.76	23.37	70.78	S
11081574970	45089376	254.9	18.2	2.1	71.3 ± 1.9	14.56 ± 0.33	172.3 ± 3.9	-1.714 ± 0.018	24.08 ± 0.68	284.9 ± 8.1	15.44	70.22	99.67	M
11090373623	46729622	99.1	-81.8	5.7	$18.6 \pm 11.$	6.06 ± 0.56	12.3 ± 1.1	-2.158 ± 0.061	8.29 ± 0.70	16.9 ± 1.4	2.33	10.89	13.61	M
11100751308	49644917	118.0	0.5	23.7	$89.6 \pm 60.$	5.7 ± 2.3	9.3 ± 3.7	-1.53 ± 0.12	3.47 ± 0.30	5.67 ± 0.49	1.76	4.02	6.07	S
11102935106	51529507	51.9	56.7	9.5	46.0 ± 4.9	5.44 ± 0.48	6.66 ± 0.59	-1.946 ± 0.083	8.9 ± 1.1	10.9 ± 1.4	2.96	7.44	10.99	S
11121031077	55154307	118.3	41.0	2.0	101.5 ± 2.6	27.20 ± 0.46	155.4 ± 2.6	-1.6182 ± 0.0098	47.10 ± 0.78	269.0 ± 4.4	2.28	12.16	59.87	M
11122567818	56487021	9.2	-52.8	6.4	$218.5 \pm 50.$	18.5 ± 1.9	22.6 ± 2.3	-1.496 ± 0.033	25.9 ± 1.4	31.7 ± 1.8	68.08	14.31	82.59	M
12011548725	58282335	61.5	-20.2	7.7	$175.7 \pm 31.$	17.4 ± 1.6	35.6 ± 3.3	-1.497 ± 0.032	26.8 ± 1.4	54.7 ± 2.9	39.98	8.87	49.06	M
12012913119	59456316	51.3	-10.6	2.5	202.6 ± 9.8	73.3 ± 2.1	89.6 ± 2.5	-1.415 ± 0.011	111.1 ± 1.9	135.9 ± 2.4	2.79	7.69	10.95	S
12021669280	61067670	89.9	58.3	1.3	100.0 ± 3.5	12.91 ± 0.35	179.1 ± 4.9	-1.509 ± 0.017	25.18 ± 0.74	$349.3 \pm 10.$	76.61	167.50	255.97	M
12032279702	64102111	194.3	11.6	9.9	–	–	–	-1.86 ± 0.12	17.1 ± 3.8	6.9 ± 1.5	5.39	1.93	9.42	M
12041265725	65902533	195.2	14.2	17.0	–	–	–	-1.83 ± 0.13	8.7 ± 2.0	7.1 ± 1.6	1.36	5.49	8.98	M
12042026776	66554780	106.2	-81.3	11.8	147.4 ± 7.7	42.8 ± 1.6	52.3 ± 1.9	-1.387 ± 0.017	79.8 ± 2.3	97.7 ± 2.9	0.75	7.24	8.11	M
12090414877	78379684	198.7	-6.6	12.5	$101.7 \pm 42.$	7.9 ± 1.5	9.7 ± 1.9	-1.791 ± 0.088	11.5 ± 1.4	14.1 ± 1.8	6.10	7.18	15.63	S
12092806448	80444854	19.9	17.7	13.5	48.2 ± 6.1	5.47 ± 0.53	4.47 ± 0.44	-1.842 ± 0.077	10.7 ± 1.3	8.7 ± 1.1	1.29	9.98	11.76	M
12102005733	82344942	159.1	-10.9	6.8	$80.8 \pm 28.$	2.54 ± 0.54	12.4 ± 2.6	-1.81 ± 0.15	4.8 ± 1.0	23.6 ± 5.2	24.87	6.28	32.05	M
12112083610	85101228	216.4	44.5	6.1	$108.9 \pm 13.$	6.17 ± 0.46	35.2 ± 2.6	-1.595 ± 0.041	10.72 ± 0.74	61.2 ± 4.2	20.12	29.69	58.55	S
12120241665	86096071	112.5	-35.5	21.0	44.3 ± 7.4	4.90 ± 0.44	18.0 ± 1.6	-2.014 ± 0.064	7.10 ± 0.69	26.1 ± 2.5	6.71	21.88	33.37	M
13010754739	89219545	126.8	-32.3	2.0	44.2 ± 3.2	8.98 ± 0.38	47.6 ± 2.0	-2.034 ± 0.033	13.03 ± 0.61	69.1 ± 3.2	12.47	20.69	43.06	S
13020154189	91378976	23.5	-2.4	11.5	20.6 ± 4.2	2.68 ± 0.30	6.57 ± 0.75	-2.23 ± 0.13	4.47 ± 0.83	10.9 ± 2.0	10.07	15.33	26.27	M

Table 5:: GBM Type 1 Events

ID	Peak s	Ra	Dec	Error	Name (distance) (sigma)	BB temp keV	BB flux $10-8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
10032800979	01383378	98.4	4.6	3.4	**4U_0614+09**	3.09 ± 0.10	3.21 ± 0.12	7.88 ± 0.31	-3.198 ± 0.097	6.46 ± 0.35	7.91 ± 0.43	2.73	11.98	16.71	S
10032840831	01423240	18.2	-26.4	9.1		1.378 ± 0.065	0.710 ± 0.057	6.96 ± 0.56	-5.73 ± 0.26	0.782 ± 0.070	7.66 ± 0.68	16.16	65.29	87.79	S
10032872401	01454801	244.9	-46.3	6.5		3.36 ± 0.31	1.95 ± 0.22	1.59 ± 0.17	-2.76 ± 0.24	3.00 ± 0.61	2.45 ± 0.50	1.10	5.87	7.25	S
10033065596	01620795	246.1	-22.8	2.9		3.17 ± 0.12	3.47 ± 0.16	32.6 ± 1.5	-3.08 ± 0.12	4.22 ± 0.33	39.6 ± 3.1	27.22	90.86	123.39	S
10033165178	01706787	236.0	-52.8	3.1		3.43 ± 0.15	3.39 ± 0.18	4.15 ± 0.22	-2.90 ± 0.13	4.51 ± 0.43	5.52 ± 0.53	1.52	7.46	11.39	S
10040229862	01844268	236.3	-54.0	5.0		3.09 ± 0.18	2.15 ± 0.15	3.52 ± 0.25	-3.12 ± 0.18	2.78 ± 0.32	4.54 ± 0.53	3.15	5.87	9.82	S
10041030044	02535643	270.3	-23.9	13.4		4.39 ± 0.59	1.75 ± 0.27	2.14 ± 0.33	-2.40 ± 0.27	3.04 ± 0.94	3.7 ± 1.1	2.52	7.26	10.29	S
10041112629	02604627	274.2	-17.0	16.5		3.24 ± 0.14	3.48 ± 0.19	5.68 ± 0.31	-3.10 ± 0.14	4.35 ± 0.40	7.11 ± 0.65	11.02	4.49	16.03	M
10041333419	02798228	285.4	-21.8	8.4		3.15 ± 0.10	3.30 ± 0.13	6.74 ± 0.27	-3.09 ± 0.10	4.14 ± 0.28	8.46 ± 0.58	2.34	14.02	16.86	M
10041672571	03096580	267.9	-28.2	3.1		2.79 ± 0.12	2.94 ± 0.15	4.80 ± 0.25	-3.34 ± 0.14	3.47 ± 0.28	5.67 ± 0.47	13.21	6.34	21.69	M
10041770998	03181438	264.1	-21.1	9.8		2.93 ± 0.16	2.28 ± 0.15	9.30 ± 0.64	-3.34 ± 0.19	2.54 ± 0.28	10.3 ± 1.1	10.02	22.19	34.72	S
10041970879	03354069	251.4	-27.0	11.3		2.79 ± 0.16	1.74 ± 0.12	7.10 ± 0.52	-3.33 ± 0.19	2.09 ± 0.23	8.53 ± 0.95	14.32	12.53	31.14	S
10041977107	03360324	256.1	-45.3	15.0		3.75 ± 0.27	2.39 ± 0.20	2.93 ± 0.25	-2.80 ± 0.19	3.33 ± 0.52	4.08 ± 0.63	2.47	5.80	10.42	S
10042152780	03508786	281.4	-56.1	8.0		3.41 ± 0.26	2.10 ± 0.19	2.57 ± 0.23	-3.05 ± 0.25	2.64 ± 0.43	3.23 ± 0.52	1.43	5.71	7.49	S
10042301086	03629893	269.0	-16.2	27.1		2.66 ± 0.25	1.17 ± 0.13	2.39 ± 0.27	-3.57 ± 0.36	1.21 ± 0.22	2.48 ± 0.45	2.33	2.75	6.99	S
10042913599	04160809	92.6	8.5	6.2	**4U_0614+09**	3.268 ± 0.084	4.78 ± 0.14	7.81 ± 0.24	-3.045 ± 0.079	6.13 ± 0.32	10.01 ± 0.53	1.63	9.12	11.04	S
10043012622	04246220	141.3	-55.5	2.7	**2S_0918-549**	3.373 ± 0.069	2.690 ± 0.063	21.97 ± 0.51	-3.030 ± 0.067	3.49 ± 0.15	28.5 ± 1.2	38.95	25.87	66.49	S
10050116904	04336902	269.0	-41.8	21.7		4.00 ± 0.43	1.76 ± 0.22	1.44 ± 0.18	-2.52 ± 0.26	3.02 ± 0.83	2.46 ± 0.68	1.30	7.81	9.72	S
10050156500	04376509	282.9	-24.5	10.7		2.76 ± 0.16	1.61 ± 0.11	5.26 ± 0.37	-3.41 ± 0.19	1.89 ± 0.20	6.20 ± 0.66	13.54	14.71	28.84	M
10050265564	04471965	264.6	-19.5	23.9		3.79 ± 0.34	2.24 ± 0.24	2.74 ± 0.30	-2.76 ± 0.26	2.88 ± 0.65	3.52 ± 0.80	5.14	6.77	12.72	S
10050277515	04483923	271.3	2.3	6.4	Ser_X-1 (1.4)	3.59 ± 0.15	3.64 ± 0.19	5.93 ± 0.31	-2.93 ± 0.13	4.54 ± 0.43	7.40 ± 0.71	10.31	9.49	21.02	M
					Swift_J185003.2-005627 (										
					SAX_J1818.7+1424 (2.0)										
10050418435	04597637	271.0	-56.0	9.7		4.36 ± 0.34	3.19 ± 0.29	2.60 ± 0.24	-2.43 ± 0.18	5.3 ± 1.1	4.34 ± 0.90	2.90	7.21	10.71	S
10050454634	04633836	283.3	-13.5	7.1		3.19 ± 0.19	2.40 ± 0.17	4.90 ± 0.36	-3.07 ± 0.18	2.98 ± 0.37	6.08 ± 0.76	11.25	9.40	21.79	M
10050508814	04674420	269.2	-9.1	16.2		3.26 ± 0.42	1.40 ± 0.21	2.29 ± 0.35	-2.90 ± 0.35	2.04 ± 0.52	3.32 ± 0.85	3.70	7.03	11.38	S
10050521228	04686830	248.8	10.5	3.9		2.570 ± 0.090	8.68 ± 0.34	10.62 ± 0.42	-3.79 ± 0.14	8.02 ± 0.42	13.08 ± 0.69	1.92	5.36	15.89	M
10050602786	04754781	278.0	-11.5	12.5		3.25 ± 0.22	2.95 ± 0.23	2.41 ± 0.19	-3.03 ± 0.20	3.77 ± 0.50	3.08 ± 0.41	3.16	5.43	9.03	S
10050632732	04784739	9.8	-33.5	17.0		2.14 ± 0.18	8.79 ± 0.94	7.17 ± 0.76	-4.42 ± 0.34	8.8 ± 1.0	7.18 ± 0.89	6.42	16.38	22.91	S
10051239731	05310139	277.2	-18.0	8.6		2.97 ± 0.16	2.15 ± 0.14	6.15 ± 0.42	-3.29 ± 0.19	2.45 ± 0.27	7.02 ± 0.78	12.80	4.29	17.68	M
10051455886	05499173	241.0	-15.8	2.8		3.12 ± 0.11	3.74 ± 0.15	21.40 ± 0.87	-3.40 ± 0.12	4.35 ± 0.25	24.8 ± 1.4	155.20	118.79	299.10	M
10051839418	05828220	95.0	4.4	8.9	**4U_0614+09**	3.11 ± 0.13	3.14 ± 0.15	5.12 ± 0.25	-3.17 ± 0.14	3.59 ± 0.24	5.86 ± 0.40	1.35	10.59	14.12	S
10052312457	06233262	289.3	-24.0	7.1		3.12 ± 0.17	2.42 ± 0.16	5.93 ± 0.40	-3.17 ± 0.18	2.79 ± 0.32	6.84 ± 0.78	10.91	5.70	17.58	S
10052508029	06401638	278.5	-6.7	11.3		3.16 ± 0.15	1.77 ± 0.10	5.80 ± 0.33	-3.18 ± 0.16	2.12 ± 0.21	6.94 ± 0.70	13.22	8.23	22.27	M
10052511154	06404738	243.1	19.8	1.7		3.569 ± 0.090	2.117 ± 0.062	50.1 ± 1.4	-2.980 ± 0.075	2.71 ± 0.13	64.2 ± 3.2	85.70	121.69	225.71	S
10052518743	06412353	269.9	-29.1	10.6		2.98 ± 0.17	1.56 ± 0.11	4.45 ± 0.32	-3.25 ± 0.19	1.88 ± 0.20	5.37 ± 0.59	7.13	10.70	20.42	S
10052523026	06416627	259.0	16.7	5.5		3.24 ± 0.10	2.103 ± 0.079	62.6 ± 2.3	-3.21 ± 0.10	2.31 ± 0.15	68.8 ± 4.5	35.98	283.28	324.50	M
10052523104	06416775	140.9	16.1	1.0		3.37 ± 0.12	1.586 ± 0.071	39.5 ± 1.7	-2.92 ± 0.12	1.85 ± 0.12	46.0 ± 3.0	74.60	119.85	323.84	M
10052527351	06420960	104.6	1.4	7.0	**4U_0614+09**	3.26 ± 0.12	3.64 ± 0.16	4.46 ± 0.20	-2.96 ± 0.11	4.92 ± 0.39	6.02 ± 0.48	1.23	7.52	9.21	S
10052851703	06704513	218.8	43.5	7.9		4.69 ± 0.31	0.915 ± 0.073	13.4 ± 1.0	-2.36 ± 0.15	1.50 ± 0.28	22.0 ± 4.1	22.90	49.07	92.90	S
10053116808	06928805	284.7	20.1	8.5	SAX_J1818.7+1424 (1.3)	3.29 ± 0.20	1.38 ± 0.10	7.35 ± 0.55	-3.02 ± 0.19	1.78 ± 0.24	9.4 ± 1.2	13.08	39.91	52.34	M
					Ser_X-1 (1.9)										
10053144251	06956268	277.6	-3.8	8.5		2.67 ± 0.12	2.02 ± 0.11	8.24 ± 0.45	-3.60 ± 0.16	2.20 ± 0.18	9.01 ± 0.73	24.71	25.24	51.27	S
10053151022	06963042	287.1	8.9	4.2	**Ser_X-1**	3.09 ± 0.14	1.83 ± 0.10	8.22 ± 0.47	-3.19 ± 0.15	2.28 ± 0.19	10.26 ± 0.88	39.99	10.12	52.65	S
10060282791	07167586	272.1	-26.0	7.5		3.35 ± 0.15	1.96 ± 0.10	5.60 ± 0.29	-3.12 ± 0.15	2.39 ± 0.21	6.83 ± 0.60	13.81	17.26	33.36	S
10060881103	07684311	273.8	-8.5	8.9		3.090 ± 0.097	4.18 ± 0.15	6.83 ± 0.25	-3.29 ± 0.10	4.90 ± 0.27	8.00 ± 0.44	1.00	15.29	16.95	M
10061134430	07896841	292.6	-53.1	21.7		3.42 ± 0.54	1.14 ± 0.21	1.39 ± 0.26	-2.90 ± 0.44	1.55 ± 0.52	1.90 ± 0.63	2.75	5.06	8.33	S
10061221236	07970037	280.0	-27.7	16.2		2.82 ± 0.18	2.27 ± 0.17	6.48 ± 0.50	-3.39 ± 0.23	2.71 ± 0.31	7.76 ± 0.90	2.06	21.62	23.88	M
10061527251	08235258	261.7	-32.4	9.1		3.10 ± 0.16	2.59 ± 0.15	4.23 ± 0.26	-3.20 ± 0.16	3.17 ± 0.30	5.17 ± 0.49	7.67	11.66	21.47	S
10061550240	08258245	280.2	-17.0	11.6		2.94 ± 0.13	2.91 ± 0.16	4.76 ± 0.26	-3.28 ± 0.15	3.49 ± 0.30	5.70 ± 0.48	13.11	3.78	17.48	M
10061611550	08305951	261.3	-31.0	6.2		3.32 ± 0.20	2.44 ± 0.17	2.99 ± 0.21	-3.01 ± 0.18	3.16 ± 0.40	3.87 ± 0.49	5.71	4.60	10.86	S
10062130406	08756809	251.6	-45.0	19.5		4.14 ± 0.50	1.97 ± 0.28	1.60 ± 0.22	-2.40 ± 0.27	3.4 ± 1.0	2.83 ± 0.88	3.93	1.85	6.57	S
10062323814	08923014	275.3	-30.5	24.0		3.51 ± 0.37	1.93 ± 0.23	1.58 ± 0.19	-3.03 ± 0.33	2.33 ± 0.50	1.90 ± 0.41	1.33	4.31	5.88	S
10062332481	08931699	285.3	3.4	8.8		3.07 ± 0.17	1.449 ± 0.095	5.32 ± 0.35	-2.81 ± 0.15	2.05 ± 0.17	7.54 ± 0.64	20.29	33.76	79.56	S
10062343966	08943185	284.6	-59.0	12.7		3.00 ± 0.27	2.12 ± 0.21	10.4 ± 1.0	-3.41 ± 0.33	2.51 ± 0.35	12.3 ± 1.7	26.45	10.89	52.51	S
10062352666	08951870	274.7	-2.5	10.1		2.74 ± 0.13	1.78 ± 0.10	5.10 ± 0.31	-3.40 ± 0.17	2.13 ± 0.19	6.09 ± 0.54	12.98	17.54	31.49	S
10062424054	09009655	276.5	-16.2	12.1		3.73 ± 0.25	2.95 ± 0.23	2.41 ± 0.18	-2.96 ± 0.20	3.74 ± 0.50	3.05 ± 0.41	4.62	5.23	10.49	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10-8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
10062541316	09113317	256.6	-23.1	9.9		3.53 ± 0.24	2.97 ± 0.23	2.42 ± 0.19	-2.89 ± 0.18	4.08 ± 0.54	3.33 ± 0.44	4.37	8.18	13.74	S
10062734651	09279456	256.6	-38.8	9.6		3.27 ± 0.21	0.395 ± 0.080	0.80 ± 0.16	-3.03 ± 0.19	0.93 ± 0.17	1.90 ± 0.35	4.32	6.57	13.14	S
10062844993	09376201	243.2	-46.2	7.4		4.13 ± 0.24	3.26 ± 0.23	3.99 ± 0.28	-2.51 ± 0.14	5.50 ± 0.80	6.72 ± 0.97	5.41	6.68	12.59	S
10062927638	09445249	261.7	-28.9	9.9		3.45 ± 0.27	3.00 ± 0.28	2.45 ± 0.23	-3.08 ± 0.25	3.56 ± 0.57	2.90 ± 0.46	2.56	5.12	8.34	S
10062963200	09480810	271.7	-12.5	18.2		4.13 ± 0.28	3.31 ± 0.26	2.70 ± 0.21	-2.78 ± 0.19	4.35 ± 0.65	3.55 ± 0.53	2.86	3.99	7.45	S
10063006322	09510313	265.4	-25.7	10.3		3.56 ± 0.24	2.91 ± 0.23	2.38 ± 0.19	-2.78 ± 0.19	4.16 ± 0.65	3.40 ± 0.53	1.24	6.43	7.95	S
10063039046	09543059	194.1	-38.3	23.2		2.75 ± 0.18	4.96 ± 0.40	6.07 ± 0.49	-3.81 ± 0.25	5.31 ± 0.52	6.50 ± 0.63	3.69	5.24	10.80	S
10070105201	09595632	264.5	5.5	7.5	**SAX_J1818.7+1424**	3.90 ± 0.29	1.099 ± 0.096	10.75 ± 0.94	-2.64 ± 0.18	1.39 ± 0.15	13.6 ± 1.4	62.06	19.82	90.96	S
10070232926	09709727	265.2	-1.8	10.7		3.63 ± 0.27	1.70 ± 0.14	3.47 ± 0.30	-2.85 ± 0.21	2.24 ± 0.35	4.58 ± 0.72	4.63	5.18	10.53	S
10070261763	09738566	250.6	-23.5	10.6		3.52 ± 0.19	3.54 ± 0.22	2.89 ± 0.18	-3.10 ± 0.17	4.20 ± 0.43	3.43 ± 0.35	4.53	5.21	10.47	S
10070268605	09745399	269.6	-16.6	11.3		3.38 ± 0.15	3.27 ± 0.17	5.35 ± 0.28	-2.92 ± 0.13	4.42 ± 0.43	7.22 ± 0.71	1.28	13.13	14.70	M
10070322160	09785366	281.8	-28.7	6.6		3.32 ± 0.22	2.11 ± 0.15	4.32 ± 0.32	-3.21 ± 0.21	2.64 ± 0.29	5.39 ± 0.60	8.56	4.06	13.26	S
10070518475	09954482	87.4	5.2	5.6	**4U_0614+09**	3.130 ± 0.086	4.48 ± 0.14	9.15 ± 0.29	-3.222 ± 0.090	5.41 ± 0.28	11.05 ± 0.58	2.59	9.73	12.76	S
10070565237	10001238	289.5	-9.6	8.6		4.21 ± 0.39	2.40 ± 0.24	1.96 ± 0.20	-2.61 ± 0.23	3.64 ± 0.75	2.96 ± 0.61	1.79	3.80	7.61	S
10070819942	10215139	253.6	-4.9	6.8		3.12 ± 0.20	1.46 ± 0.11	9.56 ± 0.75	-3.11 ± 0.20	1.86 ± 0.23	12.1 ± 1.5	30.37	33.31	65.92	S
10070830901	10226099	277.2	-24.8	4.8		4.07 ± 0.35	1.26 ± 0.12	8.29 ± 0.84	-2.48 ± 0.20	2.09 ± 0.44	13.6 ± 2.9	23.33	30.79	58.73	S
10070842735	10237935	265.1	-21.0	12.9		4.70 ± 0.53	0.99 ± 0.25	0.81 ± 0.20	-2.47 ± 0.27	1.45 ± 0.37	1.18 ± 0.30	1.45	6.68	8.34	S
10070882227	10277427	278.3	-28.9	12.8		2.90 ± 0.26	1.58 ± 0.17	2.57 ± 0.29	-3.03 ± 0.26	2.24 ± 0.39	3.66 ± 0.64	1.42	11.55	15.23	S
10071023896	10391903	278.5	3.5	8.9		2.56 ± 0.14	1.43 ± 0.10	5.25 ± 0.37	-3.50 ± 0.20	1.70 ± 0.17	6.24 ± 0.62	39.60	58.69	102.53	S
10071070739	10438736	269.1	-18.8	14.0		3.69 ± 0.32	1.80 ± 0.18	2.20 ± 0.22	-2.83 ± 0.23	2.58 ± 0.44	3.15 ± 0.54	2.64	8.76	12.04	S
10071082848	10450865	263.4	36.4	6.4		2.74 ± 0.21	0.886 ± 0.084	13.0 ± 1.2	-3.32 ± 0.26	1.09 ± 0.16	16.0 ± 2.4	16.30	37.02	59.53	S
10071130983	10485385	262.4	14.9	9.1	**SAX_J1818.7+1424**	3.42 ± 0.19	2.16 ± 0.12	10.61 ± 0.62	-2.90 ± 0.16	1.89 ± 0.16	9.29 ± 0.81	22.63	15.86	41.97	S
10071228658	10569466	289.6	8.3	6.9		2.80 ± 0.15	2.17 ± 0.14	5.31 ± 0.35	-3.36 ± 0.18	2.56 ± 0.26	6.29 ± 0.64	7.60	13.65	29.62	S
10071268622	10609426	25.3	13.8	8.9		3.07 ± 0.12	2.63 ± 0.12	4.30 ± 0.20	-3.13 ± 0.13	3.38 ± 0.27	5.52 ± 0.44	7.00	4.18	11.81	S
10071300227	10627433	260.2	-10.5	11.1		3.12 ± 0.21	1.96 ± 0.16	4.00 ± 0.33	-3.20 ± 0.22	2.34 ± 0.31	4.79 ± 0.64	12.92	12.80	26.19	M
10071316905	10644103	303.2	10.2	10.5		2.63 ± 0.12	1.700 ± 0.091	9.71 ± 0.52	-3.59 ± 0.16	1.97 ± 0.15	11.27 ± 0.87	72.23	14.03	87.66	M
10071401060	10714661	254.9	-22.7	11.3		3.54 ± 0.27	0.55 ± 0.12	0.45 ± 0.10	-2.91 ± 0.22	1.16 ± 0.26	0.95 ± 0.21	2.51	4.00	6.96	S
10071480848	10794456	291.6	15.1	13.1		3.45 ± 0.23	2.63 ± 0.21	3.22 ± 0.26	-2.92 ± 0.20	3.30 ± 0.50	4.04 ± 0.61	2.93	5.76	10.79	S
10071649236	10935638	253.6	-47.7	12.5		3.05 ± 0.23	1.90 ± 0.17	2.33 ± 0.21	-3.34 ± 0.26	2.14 ± 0.31	2.62 ± 0.38	3.19	2.84	7.23	S
10071651115	10937628	293.9	34.6	2.0		3.75 ± 0.12	1.985 ± 0.074	71.3 ± 2.6	-2.869 ± 0.093	2.58 ± 0.18	92.7 ± 6.5	263.74	61.87	336.22	M
10071667765	10954163	276.9	-38.0	10.6		2.99 ± 0.15	1.83 ± 0.11	5.98 ± 0.36	-3.29 ± 0.16	2.21 ± 0.20	7.23 ± 0.68	12.32	11.23	26.51	M
10071704513	10977312	264.2	-37.4	13.8		3.27 ± 0.22	2.59 ± 0.21	2.12 ± 0.17	-3.03 ± 0.20	3.10 ± 0.33	2.53 ± 0.27	2.71	7.23	10.31	S
10071708365	10981174	262.2	-33.5	7.4		3.01 ± 0.20	1.59 ± 0.12	3.90 ± 0.31	-3.08 ± 0.20	2.10 ± 0.27	5.16 ± 0.66	12.01	11.76	28.63	S
10071845074	11104273	317.4	43.5	6.9	4U_2129+47 (0.8) Cyg_X-2 (1.2)	4.58 ± 0.44	2.42 ± 0.28	2.97 ± 0.34	-2.38 ± 0.20	4.5 ± 1.1	5.6 ± 1.3	3.05	18.42	22.05	S
10071919633	11165229	216.7	-53.8	7.5		3.35 ± 0.25	3.79 ± 0.32	3.10 ± 0.26	-3.07 ± 0.25	4.32 ± 0.68	3.52 ± 0.55	1.45	4.03	7.69	S
10071983763	11229370	264.1	-73.7	7.4	**IGR_J17062-6143**	4.07 ± 0.42	1.71 ± 0.20	2.79 ± 0.34	-2.67 ± 0.27	2.45 ± 0.61	4.01 ± 0.99	6.91	8.30	16.02	M
10072002872	11234855	283.0	5.6	11.6		3.05 ± 0.21	1.178 ± 0.097	5.76 ± 0.47	-3.23 ± 0.23	1.38 ± 0.18	6.77 ± 0.92	2.61	3.04	7.82	S
10072072984	11304996	298.0	-18.2	13.1		3.28 ± 0.20	2.45 ± 0.18	4.00 ± 0.30	-3.03 ± 0.19	3.05 ± 0.41	4.99 ± 0.67	11.88	17.63	31.32	M
10072103225	11321629	334.5	11.1	11.8	4U_2129+12 (1.0) XTE_J2123-058 (1.8)	1.98 ± 0.12	1.55 ± 0.11	7.62 ± 0.58	-4.52 ± 0.27	1.60 ± 0.15	7.85 ± 0.77	11.28	20.96	35.32	M
10072175731	11394122	267.3	-37.8	11.1		3.39 ± 0.21	2.69 ± 0.19	2.19 ± 0.15	-3.21 ± 0.20	3.20 ± 0.35	2.61 ± 0.29	2.56	7.07	10.22	S
10072277492	11482311	258.9	-21.0	8.4		3.17 ± 0.17	3.26 ± 0.21	3.99 ± 0.26	-3.34 ± 0.19	3.45 ± 0.30	4.23 ± 0.37	2.88	6.08	10.10	S
10072282320	11487113	254.2	-20.8	12.4		3.59 ± 0.13	4.47 ± 0.19	9.13 ± 0.40	-2.95 ± 0.10	5.68 ± 0.42	11.59 ± 0.86	3.84	13.74	18.26	M
10072340326	11531533	253.8	-25.7	11.3		3.67 ± 0.25	1.64 ± 0.12	3.35 ± 0.25	-2.85 ± 0.19	2.23 ± 0.32	4.55 ± 0.65	4.55	6.18	11.22	S
10072341268	11532476	278.5	-22.0	8.5		3.13 ± 0.13	2.56 ± 0.12	5.23 ± 0.26	-3.25 ± 0.14	3.07 ± 0.24	6.26 ± 0.50	17.91	7.60	26.54	S
10072436042	11613648	273.1	-30.1	20.3		4.22 ± 0.48	2.37 ± 0.31	1.93 ± 0.25	-2.71 ± 0.30	3.19 ± 0.83	2.60 ± 0.68	5.50	4.53	11.32	S
10072466804	11644407	247.9	-32.4	13.1		3.04 ± 0.19	2.57 ± 0.19	2.09 ± 0.15	-3.18 ± 0.20	3.14 ± 0.39	2.56 ± 0.32	2.35	5.07	9.71	S
10072570559	11734564	215.9	-34.2	7.2		3.80 ± 0.34	2.28 ± 0.23	1.86 ± 0.19	-2.90 ± 0.27	2.50 ± 0.35	2.04 ± 0.28	1.89	4.02	6.25	S
10072651682	11802096	111.9	19.7	2.3		4.87 ± 0.13	3.19 ± 0.10	16.98 ± 0.53	-2.440 ± 0.060	4.18 ± 0.14	22.19 ± 0.77	30.84	25.77	59.37	S
10072670238	11820631	282.9	7.9	8.1		3.22 ± 0.14	1.392 ± 0.078	18.1 ± 1.0	-3.02 ± 0.13	1.47 ± 0.10	19.2 ± 1.4	12.75	34.34	86.74	M
10072701424	11838239	262.8	-3.2	9.2		2.81 ± 0.29	6.24 ± 0.81	7.6 ± 1.0	-3.75 ± 0.38	6.79 ± 0.97	8.3 ± 1.1	1.72	7.72	9.86	S
10072701452	11838237	271.3	-38.1	5.7		3.78 ± 0.29	2.77 ± 0.24	2.26 ± 0.20	-2.81 ± 0.21	3.62 ± 0.59	2.96 ± 0.48	1.78	8.17	10.20	S
10072716214	11853019	259.3	-39.3	11.4		3.35 ± 0.22	2.69 ± 0.21	2.19 ± 0.17	-3.10 ± 0.21	3.35 ± 0.42	2.74 ± 0.34	2.71	4.35	7.92	S
10072925964	12035567	92.8	6.1	9.4	**4U_0614+09**	3.06 ± 0.11	4.43 ± 0.19	3.62 ± 0.15	-3.09 ± 0.11	5.84 ± 0.42	4.77 ± 0.34	1.44	9.42	11.20	S
10073104971	12187376	276.1	-49.1	19.2		4.13 ± 0.31	4.74 ± 0.42	1.93 ± 0.17	-2.69 ± 0.19	6.9 ± 1.1	2.84 ± 0.46	1.71	11.76	13.87	S
10080339189	12480794	279.5	-17.4	9.6		2.60 ± 0.10	2.57 ± 0.12	6.31 ± 0.29	-3.71 ± 0.14	2.80 ± 0.18	6.87 ± 0.45	12.82	12.26	26.46	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10-8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
10080513547	12627941	301.4	-4.9	6.8	XB_1940-04 (0.8) 4U_1915-05 (1.7)	3.71 ± 0.31	1.41 ± 0.14	4.04 ± 0.41	−2.61 ± 0.21	2.22 ± 0.46	6.3 ± 1.3	1.58	18.82	20.64	M
10080934211	12994200	87.5	9.8	2.5		3.312 ± 0.048	6.64 ± 0.11	27.11 ± 0.48	−3.038 ± 0.045	8.41 ± 0.25	34.3 ± 1.0	5.96	23.28	30.67	S
10081304857	13310455	144.0	-53.2	9.2	**2S_0918-549**	3.09 ± 0.33	1.87 ± 0.66	2.29 ± 0.80	−3.34 ± 0.34	4.2 ± 1.3	5.1 ± 1.6	2.50	7.74	12.62	S
10081320858	13326470	145.7	40.6	7.5		2.27 ± 0.10	1.81 ± 0.10	4.43 ± 0.24	−3.95 ± 0.18	1.99 ± 0.15	4.88 ± 0.38	6.21	11.44	20.94	S
10081440265	13432266	232.4	-21.6	10.5		3.32 ± 0.44	2.38 ± 0.36	3.89 ± 0.59	−2.98 ± 0.35	3.47 ± 0.71	5.6 ± 1.1	2.34	3.18	6.02	S
10081545957	13524362	285.0	3.2	6.8		2.507 ± 0.095	3.70 ± 0.17	7.55 ± 0.36	−3.67 ± 0.13	4.05 ± 0.27	8.27 ± 0.55	1.87	9.19	23.82	M
10081608182	13572983	91.7	16.0	12.5	**4U_0614+09**	2.93 ± 0.22	1.75 ± 0.16	2.85 ± 0.26	−3.13 ± 0.24	2.28 ± 0.37	3.73 ± 0.60	2.10	14.71	17.25	S
10081668238	13633052	250.0	-8.8	3.8		3.050 ± 0.083	2.598 ± 0.085	25.43 ± 0.83	−3.287 ± 0.093	2.96 ± 0.15	29.0 ± 1.4	62.18	114.13	179.18	S
10081882805	13820413	246.1	-26.9	12.4		3.47 ± 0.31	2.20 ± 0.23	2.69 ± 0.29	−2.83 ± 0.25	3.02 ± 0.61	3.69 ± 0.75	1.49	12.49	14.32	M
10081908164	13832150	270.4	-11.4	11.0		3.14 ± 0.15	2.61 ± 0.15	5.32 ± 0.31	−3.16 ± 0.16	3.18 ± 0.30	6.49 ± 0.63	13.31	5.00	18.99	M
10082073275	13983672	262.8	-29.0	11.9		3.16 ± 0.22	2.17 ± 0.18	4.44 ± 0.37	−3.10 ± 0.21	2.72 ± 0.37	5.55 ± 0.76	11.64	11.64	23.96	M
10082203359	14086575	242.5	-35.7	4.6		3.82 ± 0.17	2.61 ± 0.13	17.04 ± 0.88	−2.86 ± 0.13	3.35 ± 0.32	21.8 ± 2.1	66.99	33.95	102.14	S
10082283834	14167041	277.2	-3.1	10.1		2.62 ± 0.11	3.36 ± 0.17	6.87 ± 0.35	−3.60 ± 0.15	3.66 ± 0.27	7.48 ± 0.56	12.96	6.97	20.79	M
10082571460	14413856	269.3	-32.2	15.3		3.38 ± 0.25	0.54 ± 0.12	1.10 ± 0.26	−2.88 ± 0.21	1.29 ± 0.27	2.63 ± 0.56	1.55	4.10	6.03	S
10082629604	14458387	149.2	-55.0	2.1		3.16 ± 0.18	2.33 ± 0.16	22.8 ± 1.5	−3.02 ± 0.18	2.81 ± 0.26	27.5 ± 2.5	27.82	86.06	137.35	S
10090302134	15122141	297.3	-23.0	18.5		3.65 ± 0.40	1.81 ± 0.23	1.48 ± 0.19	−2.53 ± 0.26	3.26 ± 0.84	2.66 ± 0.69	1.24	6.98	8.58	S
10090304798	15124797	291.9	-7.1	17.7		3.68 ± 0.24	1.96 ± 0.16	5.61 ± 0.46	−2.79 ± 0.18	2.68 ± 0.42	7.6 ± 1.2	13.59	9.64	23.84	M
10090449668	15256070	300.3	-56.0	24.1		3.93 ± 0.49	1.79 ± 0.26	1.46 ± 0.21	−2.37 ± 0.26	3.6 ± 1.1	2.96 ± 0.90	1.68	8.42	12.07	M
10090635823	15415026	281.0	1.8	12.3		2.08 ± 0.26	6.40 ± 0.94	5.22 ± 0.77	−4.61 ± 0.53	6.9 ± 1.0	5.64 ± 0.88	1.87	3.80	6.96	S
10090743889	15509497	259.0	-7.6	7.1		3.81 ± 0.76	4.33 ± 0.94	1.76 ± 0.38	−3.36 ± 0.30	5.67 ± 0.68	9.2 ± 1.1	7.16	3.27	17.17	M
10090755490	15521084	293.9	13.8	6.1		2.67 ± 0.12	1.481 ± 0.087	7.25 ± 0.42	−3.33 ± 0.16	1.77 ± 0.14	8.68 ± 0.68	23.40	21.27	48.62	S
10090760698	15526306	286.3	4.2	10.1		2.94 ± 0.19	1.222 ± 0.096	11.97 ± 0.94	−3.30 ± 0.22	1.46 ± 0.18	14.3 ± 1.8	35.29	24.55	61.88	S
10090836988	15588981	268.6	-31.4	19.0		3.49 ± 0.32	1.98 ± 0.21	1.62 ± 0.17	−2.99 ± 0.28	2.42 ± 0.46	1.97 ± 0.38	2.67	9.03	12.29	S
10090900353	15638758	271.0	6.8	16.9		3.60 ± 0.33	1.53 ± 0.16	2.50 ± 0.26	−2.70 ± 0.23	2.46 ± 0.48	4.02 ± 0.78	3.57	9.35	14.94	S
10090904759	15643264	157.9	77.8	3.1		4.36 ± 0.12	2.994 ± 0.090	51.3 ± 1.5	−2.579 ± 0.073	4.60 ± 0.31	78.9 ± 5.4	233.69	106.06	343.29	M
10090935538	15673959	292.9	-25.1	1.0		3.21 ± 0.17	2.82 ± 0.17	3.45 ± 0.21	−2.97 ± 0.15	3.82 ± 0.41	4.68 ± 0.51	9.04	5.62	15.49	S
10091066012	15790818	96.7	15.2	4.5	**4U_0614+09**	2.884 ± 0.061	3.031 ± 0.077	16.09 ± 0.41	−3.356 ± 0.073	3.59 ± 0.14	19.06 ± 0.76	2.73	24.53	28.32	S
10091109490	15820691	243.9	-42.7	11.4		3.14 ± 0.23	1.79 ± 0.15	2.20 ± 0.18	−3.12 ± 0.24	2.33 ± 0.33	2.86 ± 0.40	1.72	9.73	12.02	S
10091112896	15824100	290.4	-26.5	10.7		3.55 ± 0.34	0.76 ± 0.22	0.93 ± 0.28	−2.84 ± 0.28	1.55 ± 0.46	1.90 ± 0.56	1.46	5.07	10.73	S
10091179292	15890495	238.8	-57.6	12.2		3.16 ± 0.22	1.95 ± 0.16	2.39 ± 0.19	−3.18 ± 0.22	2.34 ± 0.32	2.87 ± 0.39	3.38	5.87	10.94	S
10091269920	15967505	286.9	-25.9	7.0		3.43 ± 0.25	1.76 ± 0.15	4.31 ± 0.37	−3.02 ± 0.21	2.18 ± 0.31	5.36 ± 0.76	1.61	15.44	17.52	M
10091415690	16086088	272.8	-12.8	6.1		3.112 ± 0.090	4.62 ± 0.16	7.55 ± 0.26	−3.224 ± 0.094	5.51 ± 0.29	9.00 ± 0.48	3.47	15.54	19.79	S
10091509603	16166406	256.3	-27.6	10.9		2.96 ± 0.16	1.80 ± 0.11	4.41 ± 0.29	−3.34 ± 0.18	2.12 ± 0.21	5.19 ± 0.51	5.93	20.27	26.82	S
10091532746	16189553	268.7	-38.1	7.1		3.34 ± 0.16	2.95 ± 0.16	3.61 ± 0.19	−3.12 ± 0.15	3.68 ± 0.33	4.51 ± 0.40	1.53	11.11	19.03	M
10091614913	16258127	263.5	-47.8	11.8		4.16 ± 0.29	2.76 ± 0.22	2.25 ± 0.17	−2.66 ± 0.18	4.06 ± 0.63	3.31 ± 0.51	0.77	6.52	11.89	M
10091766933	16396531	280.6	-14.6	8.8		3.16 ± 0.13	3.34 ± 0.16	4.08 ± 0.20	−3.19 ± 0.13	4.09 ± 0.32	5.01 ± 0.39	8.98	9.66	19.32	S
10091774892	16404496	257.9	-18.9	9.8		3.52 ± 0.28	2.04 ± 0.19	2.50 ± 0.23	−2.93 ± 0.25	2.60 ± 0.47	3.18 ± 0.58	3.21	7.84	11.59	S
10092019776	16608560	298.3	-20.5	11.6		4.16 ± 0.31	2.35 ± 0.21	4.80 ± 0.44	−2.63 ± 0.20	3.38 ± 0.66	6.8 ± 1.3	8.10	5.92	14.64	S
10092059784	16648573	270.1	-33.6	15.1		3.70 ± 0.34	1.97 ± 0.20	1.60 ± 0.16	−2.94 ± 0.27	2.52 ± 0.46	2.05 ± 0.38	2.79	4.97	8.49	S
10092201066	16762593	262.0	7.5	13.1		3.90 ± 0.24	1.84 ± 0.13	42.9 ± 3.0	−2.57 ± 0.13	3.08 ± 0.40	71.6 ± 9.5	177.30	213.28	396.47	S
10092223972	16785400	243.5	15.0	17.4	UW_Crb (0.6) SAX_J1818.7+1424 (1.7)	3.25 ± 0.13	1.915 ± 0.093	78.1 ± 3.8	−2.95 ± 0.12	2.46 ± 0.23	100.4 ± 9.5	123.74	300.16	440.16	S
10092524811	17045618	266.2	-14.9	7.6		3.00 ± 0.19	2.30 ± 0.18	4.69 ± 0.36	−3.20 ± 0.20	2.87 ± 0.35	5.87 ± 0.71	1.15	3.97	17.55	M
10092810839	17290846	297.2	-34.4	9.9		2.96 ± 0.23	2.53 ± 0.24	3.10 ± 0.29	−3.21 ± 0.24	3.14 ± 0.44	3.84 ± 0.54	3.04	3.91	11.50	S
10092876716	17356712	274.6	-20.7	6.9		3.12 ± 0.26	1.59 ± 0.15	3.25 ± 0.32	−3.07 ± 0.28	2.01 ± 0.34	4.10 ± 0.71	7.52	8.57	16.62	S
10093021985	17474785	280.9	-13.6	19.8		3.79 ± 0.42	1.81 ± 0.24	2.22 ± 0.29	−2.77 ± 0.31	2.06 ± 0.36	2.52 ± 0.45	4.22	5.20	10.07	S
10100140547	17579742	289.6	15.9	6.6		3.03 ± 0.10	2.45 ± 0.10	7.02 ± 0.30	−3.19 ± 0.11	2.97 ± 0.21	8.49 ± 0.61	9.54	8.03	28.11	M
10100175234	17614419	296.1	10.3	5.1		3.51 ± 0.20	1.98 ± 0.13	8.91 ± 0.61	−2.87 ± 0.16	2.34 ± 0.22	10.53 ± 0.98	10.24	31.79	46.15	S
10100203979	17629594	291.5	22.4	13.5		3.19 ± 0.24	2.13 ± 0.19	2.60 ± 0.23	−2.90 ± 0.21	2.79 ± 0.32	3.42 ± 0.39	8.55	5.21	14.65	S
10100238801	17664411	281.6	24.3	6.8	**SAX_J1818.7+1424**	3.27 ± 0.25	1.66 ± 0.15	3.40 ± 0.31	−2.98 ± 0.23	2.05 ± 0.24	4.20 ± 0.50	13.52	6.08	20.10	S
10100365914	17777909	286.0	-2.2	10.0		3.71 ± 0.27	1.89 ± 0.15	3.08 ± 0.25	−2.83 ± 0.21	2.31 ± 0.25	3.78 ± 0.42	2.92	7.44	11.11	S
10100370031	17782022	129.6	-28.8	6.3		3.35 ± 0.10	1.806 ± 0.066	12.53 ± 0.46	−2.960 ± 0.094	2.22 ± 0.10	15.44 ± 0.75	25.52	51.68	85.05	S
10100403954	17802352	245.1	-30.7	9.2		2.83 ± 0.23	2.74 ± 0.25	3.35 ± 0.31	−3.39 ± 0.27	3.19 ± 0.35	3.91 ± 0.43	8.81	28.80	39.30	S
10100408744	17807157	239.1	-14.4	1.4		3.012 ± 0.098	3.51 ± 0.14	17.19 ± 0.68	−3.33 ± 0.10	3.98 ± 0.22	19.5 ± 1.1	35.58	21.78	59.20	S
10100655628	18026828	260.9	-39.7	16.7		3.52 ± 0.26	3.44 ± 0.30	2.81 ± 0.24	−2.90 ± 0.20	4.05 ± 0.45	3.31 ± 0.37	5.18	6.16	11.78	S
10100729983	18001178	277.7	2.9	11.7		3.39 ± 0.28	1.82 ± 0.17	2.23 ± 0.21	−3.09 ± 0.27	2.14 ± 0.27	2.62 ± 0.33	1.30	3.97	5.70	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10-8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
10100818955	18162967	228.1	-59.8	10.1		3.37 ± 0.21	2.57 ± 0.19	3.14 ± 0.24	-2.96 ± 0.18	3.02 ± 0.29	3.70 ± 0.36	1.88	4.22	10.32	S
10101005668	18236081	259.4	-27.0	19.9		3.64 ± 0.30	2.71 ± 0.26	3.31 ± 0.31	-3.01 ± 0.25	3.11 ± 0.38	3.81 ± 0.47	1.67	5.11	7.18	S
10101200985	18490583	262.7	-21.8	11.3		3.23 ± 0.19	2.87 ± 0.20	3.51 ± 0.24	-3.25 ± 0.19	3.08 ± 0.28	3.77 ± 0.34	4.22	8.62	13.18	S
10101214094	18503686	94.9	13.7	7.6	**4U_0614+09**	2.92 ± 0.15	1.545 ± 0.093	6.30 ± 0.38	-3.47 ± 0.20	1.81 ± 0.16	7.40 ± 0.68	2.59	14.71	19.77	S
10101479937	18742345	264.4	-28.5	5.7		3.51 ± 0.19	1.75 ± 0.11	8.60 ± 0.54	-2.97 ± 0.15	2.32 ± 0.24	11.3 ± 1.1	15.46	5.02	21.29	M
10101485442	18661444	197.8	-79.0	11.1		2.96 ± 0.32	3.49 ± 0.42	7.13 ± 0.85	-3.48 ± 0.37	3.98 ± 0.58	8.1 ± 1.1	1.52	7.52	13.32	S
10101546522	18708924	234.6	-73.4	12.4		3.15 ± 0.28	3.48 ± 0.36	5.68 ± 0.58	-3.14 ± 0.27	4.21 ± 0.52	6.88 ± 0.85	5.61	3.74	11.12	S
10101604608	18839821	275.9	-24.1	11.4		2.83 ± 0.14	2.64 ± 0.16	4.31 ± 0.26	-3.60 ± 0.19	2.88 ± 0.24	4.71 ± 0.40	9.29	6.97	16.77	S
10101679385	18914589	236.6	-35.6	8.8		3.21 ± 0.18	2.99 ± 0.21	3.65 ± 0.26	-3.05 ± 0.17	3.74 ± 0.43	4.58 ± 0.53	1.76	7.88	14.09	M
10101708804	18930404	235.2	-49.3	9.9		3.50 ± 0.27	2.86 ± 0.26	2.34 ± 0.21	-2.85 ± 0.22	3.47 ± 0.41	2.83 ± 0.33	1.06	3.65	8.93	S
10101750885	18972485	250.9	-59.7	16.6		3.70 ± 0.28	2.69 ± 0.24	3.29 ± 0.29	-2.83 ± 0.21	3.54 ± 0.59	4.33 ± 0.72	4.67	4.01	9.57	S
10101826668	18948275	244.3	-71.0	13.1		2.98 ± 0.23	6.77 ± 0.60	8.29 ± 0.74	-3.46 ± 0.26	7.65 ± 0.81	9.36 ± 0.99	4.79	5.31	11.05	S
10101927930	19122334	296.1	-17.9	29.1		3.77 ± 0.31	0.61 ± 0.14	1.00 ± 0.22	-2.91 ± 0.24	1.01 ± 0.24	1.66 ± 0.40	4.22	6.73	11.61	S
10101974133	19168534	256.3	-51.4	11.2		3.51 ± 0.28	3.64 ± 0.34	1.48 ± 0.14	-2.92 ± 0.23	4.97 ± 0.78	2.03 ± 0.31	4.62	3.08	9.35	S
10102134438	19301624	93.4	13.3	5.7	**4U_0614+09**	2.847 ± 0.079	3.90 ± 0.12	7.96 ± 0.26	-3.416 ± 0.096	4.56 ± 0.22	9.31 ± 0.46	2.66	11.28	14.45	S
10102219790	19373390	230.5	-54.3	15.2		3.44 ± 0.25	2.04 ± 0.18	3.33 ± 0.29	-2.90 ± 0.21	2.65 ± 0.42	4.33 ± 0.69	2.48	6.03	9.46	S
10102242311	19395912	253.1	-40.5	15.9		3.26 ± 0.23	3.09 ± 0.26	2.52 ± 0.21	-3.04 ± 0.21	3.96 ± 0.56	3.23 ± 0.45	2.38	1.90	6.18	S
10102408165	19448171	248.6	-51.9	11.0		3.72 ± 0.27	1.88 ± 0.15	3.07 ± 0.25	-2.98 ± 0.21	2.16 ± 0.22	3.53 ± 0.37	3.04	3.75	8.00	S
10102642941	19742140	266.4	-31.1	11.1		3.66 ± 0.40	1.36 ± 0.17	2.22 ± 0.28	-2.93 ± 0.32	1.81 ± 0.41	2.95 ± 0.67	1.65	10.26	12.16	S
10102782706	19868303	272.9	-48.4	15.5		3.44 ± 0.30	1.85 ± 0.18	1.51 ± 0.15	-2.89 ± 0.25	2.59 ± 0.47	2.12 ± 0.38	2.88	1.86	5.27	S
10102823122	19895118	254.6	-40.5	7.3		4.01 ± 0.46	3.64 ± 0.48	1.48 ± 0.19	-2.91 ± 0.32	4.6 ± 1.0	1.90 ± 0.43	2.17	3.98	6.47	S
10102868717	19940719	306.7	-10.9	15.2		3.44 ± 0.35	1.26 ± 0.14	2.07 ± 0.24	-2.67 ± 0.25	2.17 ± 0.48	3.55 ± 0.79	8.72	4.05	13.79	S
10103100942	20132143	270.2	-26.2	11.1		3.47 ± 0.21	3.01 ± 0.20	2.46 ± 0.17	-3.08 ± 0.19	3.75 ± 0.43	3.06 ± 0.35	1.75	6.75	8.77	S
10103112541	20143743	267.2	-15.7	14.5		3.31 ± 0.33	2.96 ± 0.35	1.21 ± 0.14	-2.71 ± 0.26	4.8 ± 1.0	1.98 ± 0.43	1.36	5.40	7.01	S
10103161198	20192402	285.0	-18.7	8.2		3.01 ± 0.18	2.49 ± 0.17	3.05 ± 0.21	-3.24 ± 0.20	2.84 ± 0.25	3.48 ± 0.31	6.37	4.18	11.71	S
10110166822	20284403	257.1	-47.9	14.5		3.23 ± 0.23	1.52 ± 0.13	3.10 ± 0.27	-2.99 ± 0.22	1.95 ± 0.30	3.99 ± 0.62	8.57	6.03	15.33	M
10110226500	20330498	270.6	15.6	15.0		2.29 ± 0.20	8.9 ± 1.0	10.9 ± 1.2	-4.74 ± 0.40	9.4 ± 1.0	11.5 ± 1.2	2.06	5.36	7.82	S
10110238168	20342173	275.1	-40.9	12.9		2.85 ± 0.18	2.13 ± 0.16	2.60 ± 0.19	-3.35 ± 0.21	2.56 ± 0.30	3.13 ± 0.37	1.27	5.08	12.78	M
10110624893	20674497	243.1	-45.4	8.9		4.49 ± 0.68	0.79 ± 0.13	2.25 ± 0.38	-2.49 ± 0.34	1.33 ± 0.48	3.8 ± 1.3	3.51	6.88	10.87	S
10110671666	20721266	294.0	-28.0	12.5		2.96 ± 0.23	1.51 ± 0.13	3.71 ± 0.33	-3.34 ± 0.27	1.80 ± 0.21	4.42 ± 0.52	8.88	5.64	15.11	M
10110715547	20751547	267.8	-32.1	13.7		3.69 ± 0.26	2.54 ± 0.20	2.07 ± 0.17	-2.74 ± 0.18	3.92 ± 0.56	3.20 ± 0.46	1.58	5.96	7.90	S
10110802533	20825089	253.4	-45.9	6.5		2.59 ± 0.21	0.918 ± 0.097	21.7 ± 2.3	-3.62 ± 0.29	1.01 ± 0.13	23.9 ± 3.3	193.77	60.79	259.91	M
10110812198	20834608	276.0	-30.6	14.5		3.25 ± 0.21	2.81 ± 0.22	2.29 ± 0.17	-2.94 ± 0.19	3.72 ± 0.52	3.03 ± 0.42	4.82	6.02	12.83	S
10110812871	20835277	273.3	-11.8	4.7		3.15 ± 0.24	2.15 ± 0.19	3.51 ± 0.32	-3.07 ± 0.23	2.52 ± 0.30	4.12 ± 0.49	8.99	7.57	17.55	M
10110830976	20853378	282.6	-24.0	7.4		2.75 ± 0.20	1.83 ± 0.17	5.23 ± 0.49	-3.16 ± 0.22	2.30 ± 0.27	6.56 ± 0.78	8.73	13.70	23.31	S
10110836709	20859105	277.7	0.7	6.0		2.88 ± 0.12	2.61 ± 0.13	6.39 ± 0.33	-3.28 ± 0.14	3.08 ± 0.21	7.54 ± 0.52	1.37	19.40	21.22	M
10110857787	20880182	125.6	-40.3	9.3	**2S_0918-549**	2.91 ± 0.15	1.197 ± 0.075	6.35 ± 0.40	-3.28 ± 0.17	1.41 ± 0.12	7.50 ± 0.63	7.14	12.21	21.20	S
10110938413	20947217	255.2	-36.3	5.5		3.45 ± 0.26	2.11 ± 0.17	2.59 ± 0.21	-3.03 ± 0.24	2.51 ± 0.27	3.08 ± 0.33	15.06	9.85	25.65	M
10111505417	21432624	284.2	-28.1	10.8		2.99 ± 0.24	2.25 ± 0.22	1.83 ± 0.18	-3.23 ± 0.27	2.69 ± 0.43	2.19 ± 0.35	3.73	4.24	8.36	S
10111618405	21532012	291.0	-15.0	7.9		3.50 ± 0.22	0.67 ± 0.13	0.83 ± 0.16	-2.92 ± 0.19	1.36 ± 0.27	1.67 ± 0.33	13.93	3.50	18.57	M
10111932453	21805260	273.5	-10.6	6.8		2.96 ± 0.13	2.92 ± 0.16	5.97 ± 0.32	-3.30 ± 0.15	3.15 ± 0.23	6.43 ± 0.47	3.03	2.71	16.00	M
10112051284	21910493	302.0	-7.2	15.3		3.45 ± 0.23	2.50 ± 0.20	4.09 ± 0.33	-2.88 ± 0.20	3.24 ± 0.51	5.28 ± 0.84	8.82	6.86	16.44	S
10112077810	21937011	269.6	-30.5	9.8		3.16 ± 0.30	1.96 ± 0.22	2.39 ± 0.27	-3.18 ± 0.30	2.34 ± 0.42	2.86 ± 0.51	4.23	6.83	11.55	S
10112248938	22080937	300.9	-25.7	17.0		3.23 ± 0.26	2.33 ± 0.23	1.90 ± 0.18	-3.02 ± 0.24	3.05 ± 0.50	2.48 ± 0.41	1.78	7.15	9.36	S
10112402822	22207626	289.5	-27.3	12.5		3.09 ± 0.17	1.98 ± 0.13	4.04 ± 0.27	-3.30 ± 0.19	2.19 ± 0.25	4.47 ± 0.51	9.44	7.29	17.48	S
10112728247	22492258	275.2	-15.5	5.8		3.34 ± 0.12	3.97 ± 0.17	6.49 ± 0.27	-3.13 ± 0.11	4.52 ± 0.25	7.38 ± 0.41	1.91	6.01	14.33	M
10112813853	22477847	91.2	12.1	6.3	**4U_0614+09**	3.651 ± 0.076	6.00 ± 0.14	12.25 ± 0.29	-2.876 ± 0.061	8.12 ± 0.37	16.57 ± 0.75	2.40	13.62	18.16	S
10113068478	22791695	281.7	13.6	6.9	SAX_J1818.7+1424 (1.0) Ser_X-1 (1.3) Swift_J185003.2-005627 (	2.57 ± 0.21	1.55 ± 0.16	5.71 ± 0.62	-3.67 ± 0.30	1.68 ± 0.23	6.16 ± 0.87	12.23	10.67	23.19	M
10113084762	22807961	111.4	-29.8	7.1		3.06 ± 0.13	3.09 ± 0.16	3.78 ± 0.19	-3.20 ± 0.14	3.82 ± 0.32	4.68 ± 0.40	4.81	7.57	15.10	S
10122125604	24563207	33.0	-85.7	19.8		2.71 ± 0.18	2.13 ± 0.17	2.61 ± 0.21	-3.48 ± 0.31	1.82 ± 0.29	2.22 ± 0.36	1.46	4.71	6.40	S
10122230976	24654980	312.7	-51.9	13.0		3.07 ± 0.20	2.38 ± 0.18	2.91 ± 0.22	-3.31 ± 0.22	2.76 ± 0.27	3.38 ± 0.33	2.35	9.86	12.72	S
10122442368	24839171	238.1	-23.6	9.5		3.07 ± 0.25	1.16 ± 0.11	6.19 ± 0.61	-3.19 ± 0.27	1.29 ± 0.17	6.84 ± 0.93	2.82	5.94	9.31	S
10123019999	25248806	108.4	-53.6	4.0		3.26 ± 0.15	1.78 ± 0.10	8.02 ± 0.45	-2.99 ± 0.14	2.37 ± 0.23	10.6 ± 1.0	41.50	46.14	93.73	S
11010172661	25560667	261.8	-40.9	8.0		3.60 ± 0.22	2.03 ± 0.14	3.32 ± 0.23	-2.97 ± 0.18	2.62 ± 0.32	4.28 ± 0.52	4.59	8.19	13.58	S
11010204290	25492292	248.2	-42.7	5.2		2.97 ± 0.20	2.09 ± 0.17	4.27 ± 0.35	-3.20 ± 0.22	2.46 ± 0.26	5.03 ± 0.53	5.00	4.46	11.90	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10{-}8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
11010250886	25538890	219.2	-7.0	3.9		3.09 ± 0.30	1.34 ± 0.16	3.30 ± 0.40	-3.03 ± 0.29	1.77 ± 0.35	4.34 ± 0.87	10.18	6.99	18.54	S
11010325049	25685847	118.9	-16.4	6.9		2.56 ± 0.11	3.66 ± 0.19	4.48 ± 0.24	-3.69 ± 0.17	4.20 ± 0.31	5.14 ± 0.38	2.15	5.39	9.83	S
11010413969	25761180	303.7	-62.3	9.8		3.67 ± 0.36	1.04 ± 0.12	2.56 ± 0.29	-2.86 ± 0.29	1.44 ± 0.33	3.54 ± 0.81	3.45	21.30	25.39	S
11010448458	25795662	232.3	-41.1	10.2		4.14 ± 0.29	2.95 ± 0.23	2.41 ± 0.19	-2.50 ± 0.16	5.03 ± 0.81	4.10 ± 0.66	3.70	3.36	8.16	S
11010449579	25796791	226.2	-51.5	10.7		3.02 ± 0.31	2.28 ± 0.28	5.60 ± 0.69	-3.12 ± 0.31	2.80 ± 0.40	6.86 ± 0.99	7.23	5.16	13.03	M
11010537173	25870777	163.8	-61.1	6.9	**2S_0918-549**	3.68 ± 0.49	1.40 ± 0.21	2.86 ± 0.43	-3.13 ± 0.40	1.61 ± 0.30	3.29 ± 0.62	3.53	5.41	9.76	S
11010582534	25916138	258.2	-59.0	7.5		3.18 ± 0.25	1.30 ± 0.11	2.66 ± 0.24	-3.00 ± 0.23	1.67 ± 0.19	3.42 ± 0.39	1.65	9.22	11.33	S
11010620727	25940731	266.8	-13.2	6.8		2.63 ± 0.11	2.27 ± 0.12	5.57 ± 0.31	-3.57 ± 0.16	2.45 ± 0.21	6.02 ± 0.51	10.86	4.79	16.18	M
11010726558	26032961	258.7	-32.5	6.7		3.25 ± 0.30	1.65 ± 0.18	2.02 ± 0.23	-3.13 ± 0.30	1.88 ± 0.36	2.30 ± 0.45	2.67	3.89	8.82	S
11010813802	26106601	236.5	-62.1	16.3		2.83 ± 0.31	2.45 ± 0.31	4.00 ± 0.51	-3.22 ± 0.33	3.29 ± 0.58	5.37 ± 0.95	1.51	8.78	10.55	S
11010842360	26135177	236.1	-24.9	8.1		4.18 ± 0.47	3.59 ± 0.46	1.46 ± 0.19	-2.53 ± 0.26	4.54 ± 0.69	1.85 ± 0.28	2.39	4.11	7.29	S
11010912247	26191447	259.1	-28.5	6.1		3.44 ± 0.27	2.58 ± 0.23	2.11 ± 0.19	-2.92 ± 0.23	3.48 ± 0.54	2.84 ± 0.44	1.81	5.18	9.07	S
11011063322	26242531	248.8	-28.6	9.4		4.35 ± 0.85	0.97 ± 0.21	1.59 ± 0.34	-2.31 ± 0.40	1.37 ± 0.32	2.23 ± 0.53	2.62	5.03	8.18	S
11011173802	26425793	84.6	8.8	4.8	**4U_0614+09**	3.35 ± 0.10	4.20 ± 0.15	8.58 ± 0.30	-3.001 ± 0.093	5.37 ± 0.34	10.97 ± 0.70	2.64	14.18	17.50	S
11011455616	26666810	89.3	16.2	16.3	**4U_0614+09**	3.30 ± 0.26	2.15 ± 0.20	1.76 ± 0.16	-3.06 ± 0.25	2.65 ± 0.44	2.16 ± 0.36	1.84	3.88	6.02	S
11011722238	26806235	243.4	-47.9	4.0		3.15 ± 0.18	2.70 ± 0.19	4.40 ± 0.31	-3.12 ± 0.18	3.03 ± 0.29	4.95 ± 0.47	5.99	8.12	15.51	S
11011727613	26811654	300.9	31.2	6.2		3.33 ± 0.12	1.940 ± 0.088	17.41 ± 0.79	-2.82 ± 0.10	2.87 ± 0.24	25.7 ± 2.1	34.65	144.95	220.61	S
11011743692	26914096	272.5	-27.0	7.1		2.78 ± 0.19	2.59 ± 0.21	4.22 ± 0.35	-3.29 ± 0.22	3.16 ± 0.40	5.17 ± 0.65	12.34	10.82	23.96	M
11011855497	27012303	245.2	-26.3	12.3		3.38 ± 0.37	1.10 ± 0.14	3.15 ± 0.42	-2.83 ± 0.28	1.67 ± 0.37	4.7 ± 1.0	4.07	5.58	11.22	S
11011882052	27038861	98.5	13.2	10.4	**4U_0614+09**	2.98 ± 0.12	2.71 ± 0.13	5.55 ± 0.28	-3.23 ± 0.13	3.31 ± 0.27	6.76 ± 0.56	2.91	10.27	15.44	S
11012121527	27237535	274.4	-24.1	7.8		3.16 ± 0.19	1.92 ± 0.13	3.92 ± 0.28	-3.17 ± 0.19	2.29 ± 0.26	4.68 ± 0.54	9.76	6.95	18.09	M
11012277383	27379783	232.2	-64.0	17.9		4.13 ± 0.35	2.91 ± 0.29	3.17 ± 0.32	-2.79 ± 0.24	3.54 ± 0.70	3.85 ± 0.76	1.62	7.10	9.04	S
11012370122	27458916	279.4	12.1	5.4	SAX_J1818.7+1424 (0.9) Ser_X-1 (1.3)	3.07 ± 0.11	1.749 ± 0.072	10.00 ± 0.41	-3.09 ± 0.11	2.13 ± 0.11	12.18 ± 0.68	11.59	35.61	49.85	S
11012439618	27514823	86.1	9.5	6.0	**4U_0614+09**	3.71 ± 0.13	4.49 ± 0.20	7.33 ± 0.32	-2.76 ± 0.10	6.40 ± 0.56	10.45 ± 0.92	2.65	10.97	14.26	S
11012700992	27735397	276.5	-28.5	8.7		2.98 ± 0.17	2.44 ± 0.16	3.98 ± 0.27	-3.28 ± 0.19	2.90 ± 0.30	4.73 ± 0.49	9.33	3.84	13.84	M
11012819227	27840026	288.2	18.3	7.2	**SAX_J1818.7+1424**	3.26 ± 0.21	1.32 ± 0.10	7.56 ± 0.58	-3.03 ± 0.19	1.59 ± 0.15	9.14 ± 0.89	29.35	42.78	75.61	S
11012875313	27896138	281.5	4.6	9.1		3.01 ± 0.16	1.416 ± 0.093	10.40 ± 0.68	-3.21 ± 0.17	1.63 ± 0.14	12.0 ± 1.0	54.80	12.02	71.42	S
11012947891	27955100	260.0	-8.5	8.3		3.17 ± 0.14	3.06 ± 0.16	5.00 ± 0.27	-2.99 ± 0.13	4.04 ± 0.39	6.60 ± 0.65	12.62	6.93	19.81	M
11012962750	27969954	228.0	-61.9	21.8		3.45 ± 0.30	2.72 ± 0.28	2.22 ± 0.23	-3.23 ± 0.28	3.00 ± 0.52	2.45 ± 0.42	3.28	12.02	16.21	M
11013001398	27995054	274.2	20.8	13.9		2.30 ± 0.22	1.43 ± 0.17	7.04 ± 0.87	-3.34 ± 0.29	2.03 ± 0.27	9.9 ± 1.3	12.19	7.35	77.75	M
11013005479	27826288	262.7	-36.2	15.0		3.79 ± 0.27	2.72 ± 0.22	2.22 ± 0.18	-2.76 ± 0.19	3.70 ± 0.57	3.02 ± 0.47	2.43	4.09	7.08	S
11013143903	28123897	265.5	-31.0	14.0		3.20 ± 0.27	2.80 ± 0.28	2.29 ± 0.23	-3.03 ± 0.26	3.58 ± 0.61	2.92 ± 0.50	3.12	4.29	7.94	S
11013161975	28141978	270.4	-28.3	12.7		3.29 ± 0.20	3.04 ± 0.22	2.48 ± 0.17	-3.16 ± 0.20	3.46 ± 0.42	2.82 ± 0.34	2.52	4.12	8.06	S
11020266346	28319148	241.4	-38.1	14.1		4.08 ± 0.41	0.88 ± 0.22	0.72 ± 0.18	-2.67 ± 0.26	1.53 ± 0.38	1.25 ± 0.31	2.95	6.10	9.68	S
11020334488	28373687	246.6	-8.4	12.4		3.13 ± 0.25	2.16 ± 0.20	2.65 ± 0.24	-3.06 ± 0.25	2.88 ± 0.45	3.53 ± 0.55	2.02	4.02	6.41	S
11020404516	28430120	258.4	-9.1	10.8		3.73 ± 0.38	2.06 ± 0.24	1.68 ± 0.20	-2.86 ± 0.29	2.63 ± 0.56	2.14 ± 0.46	2.58	3.55	7.00	S
11020451394	28476996	282.4	-31.1	11.3		3.20 ± 0.15	2.32 ± 0.12	3.79 ± 0.20	-3.13 ± 0.15	2.90 ± 0.27	4.75 ± 0.44	1.52	3.52	11.52	M
11020547877	28559869	116.7	-2.1	15.0		6.6 ± 1.0	1.15 ± 0.21	3.75 ± 0.70	-2.24 ± 0.34	1.27 ± 0.26	4.15 ± 0.86	5.52	3.63	9.72	S
11020576225	28588233	267.6	-78.7	12.5		4.47 ± 0.50	1.75 ± 0.22	1.43 ± 0.18	-2.37 ± 0.26	2.13 ± 0.34	1.74 ± 0.28	1.88	5.90	8.97	S
11020579446	28591447	49.8	-57.0	11.4		3.52 ± 0.37	0.85 ± 0.10	2.09 ± 0.25	-2.80 ± 0.32	1.04 ± 0.18	2.56 ± 0.45	6.20	25.27	32.66	S
11020683414	28681805	289.8	-16.0	8.2		2.64 ± 0.10	2.68 ± 0.13	4.38 ± 0.22	-3.47 ± 0.14	3.05 ± 0.20	4.98 ± 0.33	1.23	14.35	15.75	M
11020848578	28819770	321.2	-37.1	7.3		1.714 ± 0.060	3.15 ± 0.15	3.86 ± 0.19	-4.81 ± 0.16	3.45 ± 0.20	4.22 ± 0.24	4.41	13.32	18.11	S
11020913639	28871238	259.1	-11.6	10.2		3.23 ± 0.13	3.46 ± 0.17	7.06 ± 0.36	-3.10 ± 0.13	4.25 ± 0.35	8.67 ± 0.73	2.15	18.65	21.08	M
11020913936	28871541	270.1	-38.5	17.2		3.37 ± 0.21	2.96 ± 0.22	4.84 ± 0.37	-2.89 ± 0.18	3.98 ± 0.51	6.49 ± 0.84	3.28	9.77	19.42	M
11021048257	28992261	239.5	-19.9	12.6		3.59 ± 0.33	1.73 ± 0.18	2.12 ± 0.23	-2.79 ± 0.25	2.50 ± 0.49	3.06 ± 0.60	1.32	5.85	7.43	S
11021076838	29020844	260.5	-7.4	16.5		3.71 ± 0.42	1.86 ± 0.25	2.27 ± 0.30	-2.61 ± 0.28	2.90 ± 0.77	3.55 ± 0.94	4.20	9.26	14.20	S
11021174943	29105348	260.3	-20.2	9.5		3.14 ± 0.15	2.53 ± 0.15	4.14 ± 0.25	-3.11 ± 0.16	3.09 ± 0.31	5.05 ± 0.51	7.93	7.10	16.48	M
11021270647	29187444	275.7	-15.6	4.2		3.18 ± 0.14	3.44 ± 0.19	5.62 ± 0.31	-3.16 ± 0.15	3.82 ± 0.28	6.23 ± 0.45	1.56	11.95	14.17	M
11021373353	29276556	265.6	-16.5	15.1		4.11 ± 0.33	2.27 ± 0.20	1.85 ± 0.17	-2.63 ± 0.21	3.40 ± 0.64	2.78 ± 0.52	1.68	11.34	13.25	S
11021511600	29387612	306.6	13.9	7.6		2.47 ± 0.23	1.65 ± 0.18	5.38 ± 0.59	-3.76 ± 0.36	1.82 ± 0.23	5.94 ± 0.76	19.04	39.84	83.11	S
11021529971	29405970	254.6	-47.5	8.1		4.34 ± 0.46	1.90 ± 0.23	1.55 ± 0.18	-2.59 ± 0.28	2.90 ± 0.79	2.37 ± 0.65	1.53	5.60	7.45	S
11021674170	29536576	272.6	-24.0	15.1		3.23 ± 0.22	2.89 ± 0.25	3.54 ± 0.30	-2.98 ± 0.21	3.67 ± 0.54	4.49 ± 0.66	6.45	3.49	10.68	S
11021745757	29594558	256.0	-22.8	5.2		2.94 ± 0.16	4.41 ± 0.31	6.30 ± 0.45	-3.35 ± 0.19	4.61 ± 0.44	6.59 ± 0.63	1.16	12.50	14.04	M
11021808838	29644046	246.9	-29.2	13.0		3.61 ± 0.29	2.39 ± 0.22	1.94 ± 0.18	-2.77 ± 0.22	3.31 ± 0.59	2.70 ± 0.48	2.66	4.66	7.94	S
11021909951	29731560	303.3	39.9	10.6	4U_2129+47 (1.5) Cyg_X-2 (1.7)	3.26 ± 0.32	1.88 ± 0.22	3.83 ± 0.44	-2.88 ± 0.26	2.43 ± 0.35	4.96 ± 0.72	1.99	6.46	16.98	M

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10-8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
11021937989	29759589	267.7	-31.5	11.2		3.48 ± 0.26	2.57 ± 0.22	2.10 ± 0.18	-2.91 ± 0.22	3.33 ± 0.53	2.72 ± 0.43	2.16	6.93	9.43	S
11021949643	29771250	324.0	-17.9	3.5		4.73 ± 0.26	4.55 ± 0.28	29.7 ± 1.8	-2.55 ± 0.14	6.88 ± 0.95	44.9 ± 6.2	5.03	42.38	49.57	M
11021951676	29773283	278.8	-28.4	7.4		3.08 ± 0.17	2.37 ± 0.15	2.90 ± 0.19	-3.30 ± 0.19	2.84 ± 0.29	3.48 ± 0.35	1.73	8.74	10.80	S
11022019731	29827744	242.5	-36.8	17.9		3.21 ± 0.25	1.61 ± 0.15	2.63 ± 0.24	-2.99 ± 0.24	2.07 ± 0.34	3.38 ± 0.56	2.67	6.57	9.74	S
11022076762	29884763	254.4	-27.7	18.8		3.60 ± 0.32	1.92 ± 0.19	2.35 ± 0.24	-2.98 ± 0.26	2.34 ± 0.42	2.87 ± 0.52	1.56	3.71	5.65	S
11022221159	30001963	260.5	-29.2	9.4		3.64 ± 0.29	3.75 ± 0.36	1.53 ± 0.14	-2.96 ± 0.25	4.50 ± 0.79	1.83 ± 0.32	1.70	4.22	6.17	S
11022304480	30071681	101.8	0.1	4.3		3.043 ± 0.071	7.01 ± 0.20	11.45 ± 0.32	-3.251 ± 0.077	8.30 ± 0.38	13.55 ± 0.62	2.69	9.16	16.37	S
11022319754	30086973	270.0	4.1	12.8		3.01 ± 0.17	2.78 ± 0.20	4.54 ± 0.32	-3.07 ± 0.17	3.66 ± 0.43	5.97 ± 0.70	11.21	7.71	19.47	M
11022431088	30184694	273.2	-13.5	15.5		2.83 ± 0.19	2.27 ± 0.19	2.78 ± 0.23	-3.37 ± 0.23	2.68 ± 0.34	3.28 ± 0.42	1.11	10.50	12.03	S
11022512508	30252524	267.3	-26.8	16.0		2.90 ± 0.16	2.06 ± 0.14	3.37 ± 0.23	-3.32 ± 0.19	2.47 ± 0.25	4.03 ± 0.41	6.55	5.40	13.49	S
11022852074	30551280	261.0	-13.4	16.8		3.54 ± 0.36	1.53 ± 0.18	1.88 ± 0.22	-2.87 ± 0.29	2.05 ± 0.45	2.51 ± 0.56	2.34	5.87	8.76	S
11030102349	30587956	282.1	-27.6	5.9		3.10 ± 0.21	1.90 ± 0.15	3.11 ± 0.25	-3.07 ± 0.21	2.51 ± 0.35	4.09 ± 0.57	7.58	7.58	17.10	M
11030282360	30754352	49.3	-3.4	9.9		2.23 ± 0.10	3.08 ± 0.18	5.03 ± 0.29	-3.94 ± 0.18	3.44 ± 0.27	5.62 ± 0.45	1.93	16.47	18.57	M
11030484438	30929224	281.5	-33.0	7.2		3.06 ± 0.17	2.17 ± 0.14	4.44 ± 0.29	-3.20 ± 0.17	2.71 ± 0.27	5.53 ± 0.55	3.30	12.20	15.84	M
11030572874	31004083	272.6	-7.8	7.2		2.92 ± 0.13	2.62 ± 0.14	7.48 ± 0.40	-3.33 ± 0.15	2.94 ± 0.20	8.40 ± 0.58	3.06	8.20	17.72	M
11031111348	31460962	197.8	46.7	7.8		3.94 ± 0.22	1.86 ± 0.12	4.56 ± 0.30	-2.59 ± 0.14	3.04 ± 0.41	7.4 ± 1.0	10.48	16.75	27.72	S
11031425390	31734196	271.1	-23.2	9.6		4.29 ± 0.35	2.41 ± 0.22	2.95 ± 0.27	-2.76 ± 0.21	3.27 ± 0.56	4.00 ± 0.68	4.66	7.07	12.45	S
11032026155	32253354	259.1	-49.9	12.3		3.52 ± 0.32	1.71 ± 0.18	2.10 ± 0.22	-2.97 ± 0.28	2.19 ± 0.41	2.68 ± 0.50	4.10	3.80	8.75	S
11032046331	32273528	271.2	-27.8	19.0		3.63 ± 0.27	2.92 ± 0.25	2.38 ± 0.20	-2.89 ± 0.23	3.81 ± 0.63	3.11 ± 0.51	1.84	3.10	7.01	S
11032048468	32275683	94.4	3.3	8.9	**4U_0614+09**	2.75 ± 0.17	2.64 ± 0.19	3.24 ± 0.24	-3.41 ± 0.21	3.13 ± 0.34	3.84 ± 0.42	1.48	8.06	9.83	S
11032178333	32391939	244.0	-52.3	12.4		3.95 ± 0.33	2.67 ± 0.26	2.17 ± 0.21	-2.65 ± 0.20	4.15 ± 0.73	3.38 ± 0.60	1.51	7.44	9.17	S
11032204803	32404804	263.8	-10.1	20.2		3.70 ± 0.32	2.62 ± 0.26	2.14 ± 0.21	-3.03 ± 0.25	3.21 ± 0.53	2.62 ± 0.43	1.08	9.33	10.73	S
11032304336	32490715	1.6	-0.8	7.0		1.950 ± 0.071	2.18 ± 0.10	5.35 ± 0.24	-4.46 ± 0.16	2.36 ± 0.13	5.80 ± 0.32	6.96	31.00	39.12	S
11032327432	32513834	247.6	-18.4	20.0		4.17 ± 0.44	2.55 ± 0.31	2.07 ± 0.25	-2.68 ± 0.29	3.37 ± 0.90	2.74 ± 0.73	1.21	4.83	6.31	S
11032331076	32517482	251.6	-57.3	4.5		2.723 ± 0.079	2.449 ± 0.088	10.99 ± 0.39	-3.49 ± 0.10	2.73 ± 0.15	12.27 ± 0.67	24.59	8.84	34.53	M
11032360899	32547298	284.3	-31.3	21.0		2.92 ± 0.22	1.72 ± 0.15	3.50 ± 0.32	-3.51 ± 0.27	1.85 ± 0.25	3.77 ± 0.52	1.09	10.02	11.49	M
11032483901	32656707	264.6	-29.1	12.8		3.15 ± 0.25	2.63 ± 0.25	2.15 ± 0.20	-3.22 ± 0.26	3.00 ± 0.46	2.45 ± 0.37	3.96	2.94	9.31	S
11032703749	32835766	270.4	-2.5	11.1		2.844 ± 0.093	3.11 ± 0.12	5.09 ± 0.19	-3.39 ± 0.11	3.70 ± 0.22	6.05 ± 0.37	12.77	3.98	17.74	M
11032715596	32847619	306.8	3.0	16.0		3.05 ± 0.41	0.89 ± 0.14	2.56 ± 0.41	-3.08 ± 0.42	1.11 ± 0.24	3.19 ± 0.68	11.99	4.00	17.57	M
11032760330	32892324	286.9	20.1	11.6		2.79 ± 0.20	1.64 ± 0.14	3.35 ± 0.29	-3.33 ± 0.23	1.94 ± 0.22	3.97 ± 0.45	11.41	2.09	15.28	S
11032765184	32897188	284.6	5.1	7.7		2.43 ± 0.10	2.31 ± 0.12	5.65 ± 0.30	-3.69 ± 0.15	2.66 ± 0.19	6.53 ± 0.47	21.28	4.84	30.17	S
11032902720	33007524	245.7	9.5	16.4	UW_Crb (1.0) SAX_J1818.7+1424 (1.8)	3.73 ± 0.76	1.36 ± 0.31	1.67 ± 0.38	-3.06 ± 0.69	1.58 ± 0.68	1.93 ± 0.84	0.91	8.07	9.12	S
11033044815	33136015	253.4	-46.2	6.5		3.04 ± 0.22	1.87 ± 0.16	3.82 ± 0.34	-3.19 ± 0.24	2.31 ± 0.33	4.71 ± 0.67	5.98	2.99	10.59	S
11033080956	33172132	274.9	-14.7	4.7		3.27 ± 0.12	3.77 ± 0.16	6.16 ± 0.27	-3.12 ± 0.11	4.30 ± 0.24	7.02 ± 0.39	1.59	15.99	17.96	M
11040237921	33388333	350.1	-38.5	4.5		4.64 ± 0.15	1.741 ± 0.066	13.50 ± 0.51	-2.490 ± 0.083	2.87 ± 0.25	22.2 ± 1.9	34.15	65.98	104.93	S
11040281062	33431471	233.0	-35.1	8.6		3.37 ± 0.21	3.03 ± 0.22	2.47 ± 0.18	-3.00 ± 0.19	3.86 ± 0.48	3.15 ± 0.39	5.46	5.17	12.26	S
11040323314	33460105	286.0	-9.8	10.3		2.93 ± 0.18	1.99 ± 0.14	4.87 ± 0.36	-3.34 ± 0.21	2.36 ± 0.26	5.78 ± 0.65	1.38	15.91	17.47	M
11040356126	33492935	286.2	-18.8	21.3		3.13 ± 0.16	2.21 ± 0.14	3.61 ± 0.22	-3.12 ± 0.16	2.74 ± 0.29	4.48 ± 0.48	7.21	8.35	16.01	M
11040412725	33535936	138.3	-51.3	2.8	**2S_0918-549**	3.139 ± 0.074	3.110 ± 0.085	17.77 ± 0.49	-3.113 ± 0.077	3.97 ± 0.19	22.7 ± 1.0	36.77	33.94	75.66	S
11040754930	33837340	256.1	-40.4	13.0		3.56 ± 0.26	2.93 ± 0.25	2.39 ± 0.20	-2.89 ± 0.21	3.89 ± 0.58	3.18 ± 0.48	3.90	5.13	9.43	S
11040783476	33865876	276.2	-28.2	13.3		3.13 ± 0.24	2.67 ± 0.25	3.27 ± 0.30	-3.09 ± 0.23	3.42 ± 0.50	4.18 ± 0.62	2.03	7.82	10.37	M
11040847456	33916254	238.0	-43.6	10.2		4.10 ± 0.33	1.91 ± 0.18	3.13 ± 0.29	-2.62 ± 0.19	2.97 ± 0.51	4.85 ± 0.84	3.82	7.94	12.39	S
11040940928	33996128	263.7	-27.8	5.4		3.89 ± 0.23	3.61 ± 0.24	2.94 ± 0.19	-2.80 ± 0.16	4.91 ± 0.62	4.01 ± 0.51	2.12	10.85	14.41	S
11041059827	34101429	198.7	-30.8	17.0		2.81 ± 0.17	3.85 ± 0.28	3.14 ± 0.23	-3.56 ± 0.22	4.33 ± 0.43	3.53 ± 0.35	3.14	4.85	10.54	S
11041071484	34113077	242.5	-22.1	8.3		3.11 ± 0.21	1.79 ± 0.14	3.66 ± 0.30	-3.36 ± 0.23	2.00 ± 0.20	4.08 ± 0.42	8.51	15.50	26.44	S
11041107933	34135935	228.6	-33.1	20.2		3.21 ± 0.55	1.37 ± 0.26	2.23 ± 0.43	-3.06 ± 0.49	1.89 ± 0.53	3.08 ± 0.87	2.45	2.57	5.99	S
11041126783	34154788	275.7	-28.1	7.3		4.01 ± 0.21	2.76 ± 0.17	3.38 ± 0.21	-2.65 ± 0.14	4.01 ± 0.53	4.92 ± 0.65	4.20	9.46	14.33	S
11041129388	34157398	329.0	-73.4	20.1		3.53 ± 0.25	2.23 ± 0.18	5.48 ± 0.45	-3.06 ± 0.21	2.57 ± 0.27	6.29 ± 0.67	1.60	14.88	16.94	M
11041175229	34203233	268.9	-35.4	8.2		3.61 ± 0.26	1.73 ± 0.14	2.83 ± 0.24	-2.81 ± 0.21	2.40 ± 0.39	3.91 ± 0.64	2.16	7.94	10.45	S
11041234665	34249073	265.2	-28.9	16.1		3.89 ± 0.25	2.92 ± 0.21	2.39 ± 0.17	-2.89 ± 0.19	3.71 ± 0.50	3.03 ± 0.40	1.95	4.04	8.31	S
11041257246	34271657	265.3	-35.8	9.5		3.92 ± 0.24	2.41 ± 0.16	2.95 ± 0.20	-2.82 ± 0.17	3.28 ± 0.41	4.02 ± 0.50	4.35	7.81	12.78	S
11041758148	34704550	287.4	-33.8	8.9		3.17 ± 0.23	2.77 ± 0.24	2.26 ± 0.19	-3.24 ± 0.24	3.14 ± 0.44	2.57 ± 0.35	1.58	4.25	6.04	S
11042183553	35075562	265.0	-23.4	13.1		3.15 ± 0.19	2.96 ± 0.22	2.42 ± 0.18	-3.16 ± 0.20	3.40 ± 0.43	2.77 ± 0.35	1.95	4.36	7.44	S
11042255142	35133547	237.2	-47.5	17.6		3.38 ± 0.23	3.97 ± 0.31	3.24 ± 0.25	-3.16 ± 0.21	4.79 ± 0.60	3.91 ± 0.49	2.66	4.84	8.05	S
11042308745	35173545	248.6	-25.0	15.4		4.19 ± 0.52	4.03 ± 0.59	1.64 ± 0.24	-2.45 ± 0.27	7.0 ± 2.1	2.88 ± 0.87	1.68	4.55	6.64	S
11042452346	35303536	93.2	14.3	3.4	**4U_0614+09**	3.057 ± 0.064	4.95 ± 0.12	14.15 ± 0.35	-3.271 ± 0.071	5.93 ± 0.23	16.95 ± 0.67	6.01	13.31	20.05	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak	Ra	Dec	Error	Name(distance)	BB temp	BB flux	BB Flnc	PL index	PL Flux	PL Flnc	Rise	Fall	Duration	Structure
	s				(sigma)	keV	$10-8$ erg cm^{-2} s^{-1}	10^{-7}erg cm^{-2}		10^{-8}erg cm^{-2} s^{-1}	10^{-7} erg cm^{-2}	sec	sec	sec	
11042607527	35431531	347.4	-48.3	10.4		3.39 ± 0.25	8.33 ± 0.69	6.80 ± 0.57	-3.42 ± 0.25	9.6 ± 1.0	7.87 ± 0.82	2.95	3.51	6.99	S
11042706372	35516781	274.0	-20.7	13.4		2.65 ± 0.15	2.05 ± 0.15	5.87 ± 0.44	-3.43 ± 0.19	2.42 ± 0.26	6.92 ± 0.76	12.91	6.08	19.53	M
11042709375	35519783	275.1	-36.9	8.9		4.22 ± 0.29	2.72 ± 0.22	3.33 ± 0.27	-2.50 ± 0.17	4.39 ± 0.82	5.3 ± 1.0	6.85	3.75	11.47	S
11042724024	35534424	288.3	-30.5	10.2		3.34 ± 0.35	1.29 ± 0.15	2.12 ± 0.26	-2.82 ± 0.28	1.98 ± 0.42	3.24 ± 0.69	1.05	12.83	14.33	M
11042827941	35624740	65.7	-1.7	8.4		2.37 ± 0.13	1.46 ± 0.10	5.98 ± 0.44	-3.72 ± 0.20	1.77 ± 0.18	7.23 ± 0.74	9.91	8.15	19.53	S
11042900650	35683861	284.8	-61.0	8.4	**IGR_J17062-6143**	3.22 ± 0.21	1.55 ± 0.12	3.81 ± 0.30	-2.91 ± 0.19	1.92 ± 0.20	4.72 ± 0.50	10.23	10.38	22.03	S
11043040610	35810217	255.9	-39.9	4.7		2.95 ± 0.23	2.82 ± 0.27	2.30 ± 0.22	-3.20 ± 0.24	3.49 ± 0.52	2.85 ± 0.42	4.45	5.58	13.52	S
11043068099	35837705	94.1	7.3	5.7	**4U_0614+09**	3.157 ± 0.079	5.21 ± 0.15	10.64 ± 0.32	-3.094 ± 0.079	6.65 ± 0.34	13.58 ± 0.69	5.08	7.97	14.32	S
11043075354	35844951	278.2	-18.8	5.3		3.38 ± 0.19	2.36 ± 0.16	5.02 ± 0.34	-3.10 ± 0.18	2.71 ± 0.32	5.75 ± 0.68	7.16	4.08	11.80	M
11050115752	35871738	184.9	73.8	1.0		3.427 ± 0.069	6.71 ± 0.16	24.65 ± 0.59	-2.952 ± 0.060	7.76 ± 0.24	28.50 ± 0.90	8.56	20.51	42.90	S
11050275778	36018183	281.0	-35.9	9.4		4.73 ± 0.48	1.78 ± 0.21	7.28 ± 0.86	-2.31 ± 0.21	3.39 ± 0.87	13.8 ± 3.5	2.49	8.90	17.95	M
11050412290	36127479	280.2	-20.2	5.7		3.66 ± 0.28	1.80 ± 0.16	4.41 ± 0.41	-2.60 ± 0.19	2.98 ± 0.56	7.3 ± 1.3	1.68	7.61	17.49	M
11050570305	36271904	98.0	8.9	8.0	**4U_0614+09**	3.05 ± 0.12	3.79 ± 0.18	4.64 ± 0.22	-3.20 ± 0.13	4.59 ± 0.36	5.63 ± 0.45	1.42	5.98	7.60	S
11050667204	36355212	276.6	-42.7	9.8		2.95 ± 0.15	3.21 ± 0.21	3.93 ± 0.25	-3.27 ± 0.17	3.79 ± 0.38	4.64 ± 0.47	8.59	5.94	15.16	M
11050860790	36521607	204.3	-46.2	9.2		5.85 ± 0.46	1.99 ± 0.18	4.88 ± 0.44	-2.38 ± 0.17	2.20 ± 0.23	5.40 ± 0.58	22.63	22.98	54.80	S
11051024677	36658268	251.4	-20.1	4.2		3.52 ± 0.19	1.91 ± 0.12	9.39 ± 0.59	-2.86 ± 0.15	2.28 ± 0.17	11.17 ± 0.88	20.06	65.06	89.38	S
11051225837	36832231	273.1	-29.9	13.3		3.63 ± 0.25	3.05 ± 0.24	3.73 ± 0.29	-3.04 ± 0.18	3.76 ± 0.36	4.60 ± 0.44	8.56	3.38	13.27	S
11051230231	36836625	259.9	-35.5	10.1		2.92 ± 0.20	1.90 ± 0.15	3.88 ± 0.31	-3.36 ± 0.22	2.29 ± 0.27	4.68 ± 0.56	14.75	6.96	26.19	S
11051347718	36940530	273.3	-5.6	11.2		2.91 ± 0.16	2.10 ± 0.14	4.30 ± 0.29	-3.38 ± 0.19	2.33 ± 0.25	4.76 ± 0.52	8.59	11.53	20.50	S
11051519580	37085182	97.9	26.1	7.1		2.780 ± 0.093	3.57 ± 0.14	8.75 ± 0.35	-3.116 ± 0.097	4.36 ± 0.27	10.68 ± 0.66	2.19	15.61	19.07	S
11051768868	37307279	266.7	-10.9	8.0		2.784 ± 0.089	3.78 ± 0.14	6.18 ± 0.24	-3.42 ± 0.10	4.39 ± 0.24	7.17 ± 0.40	11.40	8.64	21.25	M
11052164086	37648090	151.1	-49.9	8.1	**2S_0918-549**	3.63 ± 0.25	2.04 ± 0.16	10.00 ± 0.81	-2.87 ± 0.20	2.79 ± 0.43	13.7 ± 2.1	15.13	25.90	44.15	S
11052348710	37805505	243.6	-56.8	4.3		2.55 ± 0.13	3.29 ± 0.21	4.03 ± 0.26	-3.66 ± 0.18	3.70 ± 0.32	4.54 ± 0.40	1.61	9.04	12.52	S
11052383149	37839954	280.9	1.2	12.2		3.74 ± 0.32	1.82 ± 0.18	3.72 ± 0.38	-2.55 ± 0.19	2.48 ± 0.29	5.07 ± 0.60	15.55	7.66	24.99	S
11052442973	37886177	274.1	-30.5	20.1		3.10 ± 0.20	3.01 ± 0.23	2.45 ± 0.19	-3.24 ± 0.21	3.54 ± 0.43	2.89 ± 0.35	2.06	3.11	7.57	S
11052514039	37943645	262.6	-22.2	16.7		3.60 ± 0.28	2.13 ± 0.19	2.61 ± 0.23	-2.81 ± 0.21	2.91 ± 0.48	3.57 ± 0.59	2.46	3.67	6.97	S
11052531507	37961110	253.1	-37.5	11.9		3.50 ± 0.30	2.36 ± 0.24	2.89 ± 0.30	-2.76 ± 0.23	3.39 ± 0.67	4.15 ± 0.82	1.44	13.44	15.32	M
11052682465	38098465	250.5	-37.5	10.8		3.13 ± 0.24	2.84 ± 0.27	2.32 ± 0.22	-3.11 ± 0.24	3.46 ± 0.55	2.82 ± 0.44	1.71	9.76	11.84	S
11052816713	38205520	252.7	-62.2	8.9		3.29 ± 0.19	2.24 ± 0.16	3.66 ± 0.26	-3.03 ± 0.18	2.82 ± 0.34	4.60 ± 0.56	2.80	8.40	12.42	S
11052921641	38296874	340.3	-22.1	8.3		3.88 ± 0.11	2.597 ± 0.088	36.0 ± 1.2	-2.750 ± 0.089	3.77 ± 0.27	52.4 ± 3.8	50.41	72.97	142.49	S
11053044763	38406358	245.2	-49.8	20.2		3.36 ± 0.21	3.05 ± 0.22	4.98 ± 0.37	-3.22 ± 0.21	3.46 ± 0.43	5.64 ± 0.70	4.13	12.08	17.05	S
11053074647	38436255	274.1	-21.6	7.1		3.73 ± 0.31	4.09 ± 0.40	1.67 ± 0.16	-2.86 ± 0.22	5.60 ± 0.92	2.28 ± 0.37	2.11	5.09	8.50	S
11053142055	38490060	291.6	-27.6	7.6		3.33 ± 0.17	1.72 ± 0.10	4.23 ± 0.25	-2.96 ± 0.15	2.11 ± 0.16	5.18 ± 0.40	3.32	14.06	23.77	M
11060326889	38734086	248.5	-56.2	11.6		2.99 ± 0.14	1.90 ± 0.10	4.66 ± 0.26	-3.18 ± 0.15	2.35 ± 0.23	5.76 ± 0.57	2.93	7.84	11.31	S
11060385546	38792754	230.5	-44.7	9.1		2.60 ± 0.12	2.46 ± 0.14	4.02 ± 0.22	-3.58 ± 0.17	2.62 ± 0.21	4.28 ± 0.35	2.39	7.40	12.03	S
11060432545	38826146	267.8	-29.9	13.1		2.78 ± 0.23	2.74 ± 0.28	2.24 ± 0.23	-3.45 ± 0.29	3.14 ± 0.49	2.56 ± 0.40	2.39	6.51	9.37	S
11060454560	38848160	264.2	-12.4	10.0		3.42 ± 0.37	1.86 ± 0.23	3.04 ± 0.38	-3.11 ± 0.34	2.32 ± 0.46	3.79 ± 0.75	5.04	6.89	12.58	S
11060463593	38857194	260.9	-29.8	16.3		3.22 ± 0.39	0.78 ± 0.11	1.59 ± 0.22	-2.89 ± 0.36	1.14 ± 0.29	2.34 ± 0.60	2.30	7.40	10.03	S
11060508633	38888640	254.6	6.1	4.0		3.41 ± 0.18	4.02 ± 0.26	4.93 ± 0.32	-2.95 ± 0.16	5.06 ± 0.60	6.20 ± 0.73	10.62	3.55	15.19	M
11060547458	38927479	43.5	-30.2	7.4		4.42 ± 0.25	2.60 ± 0.17	5.31 ± 0.34	-2.42 ± 0.13	4.44 ± 0.68	9.0 ± 1.3	34.18	7.25	42.21	M
11060554510	38934516	275.1	-59.3	28.5		3.44 ± 0.33	5.13 ± 0.54	8.36 ± 0.89	-3.00 ± 0.28	6.8 ± 1.0	11.1 ± 1.7	1.91	7.19	13.30	M
11060677755	39044159	257.3	-42.1	12.6		2.94 ± 0.11	3.50 ± 0.16	4.29 ± 0.20	-3.24 ± 0.12	4.27 ± 0.32	5.23 ± 0.40	4.10	9.79	14.63	S
11060767901	39120711	272.9	-24.1	9.9		3.55 ± 0.21	2.40 ± 0.17	2.94 ± 0.20	-2.99 ± 0.18	3.08 ± 0.38	3.78 ± 0.47	2.53	6.19	10.94	S
11060832493	39171699	251.2	-26.3	7.8		2.78 ± 0.17	2.39 ± 0.18	3.90 ± 0.29	-3.69 ± 0.22	2.49 ± 0.26	4.06 ± 0.42	5.17	3.72	9.41	M
11060971000	39296602	225.1	-34.5	25.2		3.00 ± 0.35	1.92 ± 0.27	0.78 ± 0.11	-3.28 ± 0.39	2.29 ± 0.51	0.93 ± 0.21	2.60	5.39	8.79	S
11061027315	39339321	262.1	-51.3	11.0		3.19 ± 0.15	3.13 ± 0.17	2.55 ± 0.14	-3.13 ± 0.14	4.15 ± 0.36	3.38 ± 0.29	1.71	7.13	9.23	S
11061046887	39358889	263.8	-4.0	11.4		3.31 ± 0.14	3.69 ± 0.19	6.03 ± 0.32	-3.08 ± 0.14	4.38 ± 0.40	7.14 ± 0.65	8.64	7.90	17.29	S
11061313406	39584598	230.2	-43.0	10.6		2.70 ± 0.12	2.83 ± 0.16	3.47 ± 0.19	-3.51 ± 0.16	3.19 ± 0.27	3.91 ± 0.33	2.55	8.11	11.91	S
11061501038	39745042	240.0	-49.2	6.8		2.55 ± 0.15	3.20 ± 0.23	2.61 ± 0.19	-3.64 ± 0.21	3.60 ± 0.37	2.93 ± 0.30	2.83	4.28	7.71	S
11062230862	40379665	265.8	-53.9	22.5		3.72 ± 0.32	3.16 ± 0.31	3.87 ± 0.38	-2.87 ± 0.24	4.13 ± 0.72	5.05 ± 0.88	1.79	10.11	12.33	S
11062250752	40399557	281.2	-26.3	6.0		3.46 ± 0.19	2.97 ± 0.19	3.64 ± 0.24	-3.00 ± 0.17	3.72 ± 0.44	4.56 ± 0.53	9.54	5.12	15.00	S
11062273625	40422424	251.9	-42.7	7.9		3.09 ± 0.12	2.74 ± 0.13	4.48 ± 0.21	-3.28 ± 0.14	3.27 ± 0.24	5.34 ± 0.40	2.42	8.03	10.83	S
11062371633	40506837	281.0	-9.2	14.0		3.23 ± 0.19	1.82 ± 0.12	5.22 ± 0.36	-3.10 ± 0.19	2.20 ± 0.26	6.30 ± 0.74	8.48	6.06	15.57	S
11062746760	40827558	278.6	-3.0	13.1		3.13 ± 0.19	1.80 ± 0.13	3.67 ± 0.26	-3.19 ± 0.20	2.10 ± 0.25	4.29 ± 0.52	1.31	11.55	13.17	M
11062776831	40857636	274.5	-21.3	7.8		3.38 ± 0.17	3.40 ± 0.19	4.16 ± 0.24	-3.07 ± 0.18	3.58 ± 0.40	4.38 ± 0.48	1.69	12.21	14.33	S
11062862784	40930001	281.3	-17.9	7.8		3.32 ± 0.19	2.12 ± 0.15	4.34 ± 0.30	-3.04 ± 0.18	2.61 ± 0.32	5.33 ± 0.66	9.72	4.68	14.82	S
11062870080	40937291	216.2	-41.1	5.4		3.07 ± 0.13	3.99 ± 0.20	4.88 ± 0.24	-3.40 ± 0.14	4.49 ± 0.33	5.49 ± 0.41	2.42	11.36	15.04	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10{-}8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
11063045082	41085085	226.0	-33.0	6.7		4.10 ± 0.33	1.55 ± 0.14	3.80 ± 0.34	−2.84 ± 0.16	4.29 ± 0.53	3.50 ± 0.43	4.36	4.14	11.26	S
11070251428	41264237	301.9	6.5	12.7		2.84 ± 0.14	3.60 ± 0.22	2.94 ± 0.18	−3.38 ± 0.17	4.18 ± 0.40	3.41 ± 0.33	4.44	11.38	16.39	S
11070332604	41331800	207.6	-57.0	12.4		3.77 ± 0.28	2.71 ± 0.25	3.31 ± 0.30	−2.65 ± 0.20	3.97 ± 0.76	4.86 ± 0.93	2.72	10.11	13.48	S
11070350849	41350057	251.6	-39.6	17.8		2.94 ± 0.25	0.34 ± 0.10	0.278 ± 0.088	−3.35 ± 0.28	0.86 ± 0.24	0.70 ± 0.20	2.21	1.90	5.16	S
11070364583	41363777	53.3	74.3	1.0		3.70 ± 0.11	4.57 ± 0.16	22.41 ± 0.81	−2.837 ± 0.088	5.92 ± 0.41	28.9 ± 2.0	26.53	36.06	64.66	S
11070380162	41379373	263.4	-45.0	11.6		4.17 ± 0.34	2.97 ± 0.28	2.42 ± 0.23	−2.72 ± 0.24	3.72 ± 0.79	3.04 ± 0.64	2.95	4.80	8.21	S
11070519643	41491630	217.7	-57.8	11.7		3.51 ± 0.29	2.44 ± 0.24	2.99 ± 0.30	−2.97 ± 0.26	2.93 ± 0.55	3.59 ± 0.67	2.57	8.88	11.87	S
11070726188	41670991	275.4	-0.6	7.2		2.97 ± 0.14	2.07 ± 0.12	6.77 ± 0.40	−3.15 ± 0.15	2.48 ± 0.18	8.12 ± 0.61	5.88	5.98	13.08	S
11070859370	41790580	266.1	-18.8	8.2		3.08 ± 0.11	3.77 ± 0.16	6.15 ± 0.27	−3.28 ± 0.12	4.42 ± 0.30	7.21 ± 0.49	8.69	9.93	19.45	M
11070924160	41841755	251.2	-51.0	21.0		2.74 ± 0.20	1.94 ± 0.17	2.38 ± 0.21	−3.53 ± 0.28	2.34 ± 0.33	2.86 ± 0.41	5.54	7.72	14.01	S
11071012340	41916348	266.0	-22.3	12.7		3.51 ± 0.27	2.00 ± 0.18	3.26 ± 0.30	−3.06 ± 0.25	2.33 ± 0.38	3.80 ± 0.62	6.62	3.31	12.79	S
11071023262	41927265	254.0	-32.4	16.1		3.61 ± 0.30	2.22 ± 0.22	2.71 ± 0.26	−2.75 ± 0.23	3.18 ± 0.59	3.89 ± 0.73	4.12	11.98	16.61	S
11071102902	41993298	277.8	-14.5	6.6		3.95 ± 0.31	1.78 ± 0.15	4.37 ± 0.38	−2.67 ± 0.19	2.23 ± 0.23	5.47 ± 0.58	1.30	13.66	15.32	M
11071182737	42073134	276.2	-15.0	9.6		3.03 ± 0.16	2.58 ± 0.16	4.20 ± 0.26	−3.17 ± 0.17	3.25 ± 0.32	5.31 ± 0.52	2.79	11.56	15.11	M
11071230276	42107067	260.4	-29.2	15.0		3.25 ± 0.20	3.07 ± 0.22	2.51 ± 0.18	−3.11 ± 0.19	3.84 ± 0.44	3.13 ± 0.36	2.62	5.55	8.60	S
11071231262	42108080	270.5	-18.8	5.0		3.20 ± 0.17	2.15 ± 0.13	6.15 ± 0.39	−3.03 ± 0.16	2.75 ± 0.31	7.87 ± 0.88	10.67	9.25	20.51	S
11071264792	42141593	255.5	-4.7	14.6		2.73 ± 0.17	3.32 ± 0.24	5.43 ± 0.39	−3.81 ± 0.23	3.51 ± 0.33	5.73 ± 0.54	3.18	9.22	14.49	S
11071311779	42174798	246.2	-52.5	3.8		2.86 ± 0.17	3.33 ± 0.24	2.72 ± 0.20	−3.51 ± 0.22	3.59 ± 0.40	2.93 ± 0.32	2.51	3.25	6.61	S
11071346863	42210067	224.6	-55.2	7.7		3.27 ± 0.20	2.59 ± 0.18	3.17 ± 0.22	−3.28 ± 0.21	2.89 ± 0.33	3.54 ± 0.41	2.99	8.21	11.79	S
11071463489	42313088	263.2	-48.8	10.2		3.37 ± 0.21	4.31 ± 0.31	3.52 ± 0.25	−2.98 ± 0.18	5.74 ± 0.72	4.68 ± 0.59	2.47	5.44	10.36	S
11071509495	42345494	253.3	-37.5	6.5		3.02 ± 0.13	3.58 ± 0.19	4.38 ± 0.24	−3.30 ± 0.15	4.19 ± 0.34	5.14 ± 0.42	3.24	16.84	20.70	S
11071529279	42365304	295.7	-11.7	17.0		4.03 ± 0.37	2.40 ± 0.26	2.94 ± 0.32	−2.67 ± 0.23	3.28 ± 0.69	4.01 ± 0.84	2.65	6.84	9.87	S
11071551894	42387892	262.1	-45.0	20.3		3.61 ± 0.32	2.21 ± 0.23	2.71 ± 0.28	−3.01 ± 0.26	2.71 ± 0.49	3.31 ± 0.60	1.96	5.79	8.98	S
11071552335	42388330	275.4	-12.7	14.8		2.80 ± 0.16	2.33 ± 0.16	3.80 ± 0.27	−3.58 ± 0.22	2.40 ± 0.27	3.92 ± 0.44	1.54	15.12	16.95	M
11071575298	42411306	294.8	-14.6	10.0		3.51 ± 0.25	2.20 ± 0.18	3.59 ± 0.30	−2.99 ± 0.22	2.63 ± 0.41	4.30 ± 0.67	10.79	7.13	18.29	S
11071578153	42414158	257.4	-42.2	6.1		3.45 ± 0.28	1.91 ± 0.18	3.11 ± 0.29	−2.91 ± 0.23	2.35 ± 0.28	3.85 ± 0.45	1.57	5.42	9.26	S
11071762743	42571543	252.3	-44.0	21.3		4.37 ± 0.38	3.23 ± 0.32	2.63 ± 0.26	−2.60 ± 0.21	4.54 ± 0.88	3.70 ± 0.72	2.63	7.48	10.61	S
11071765513	42574313	253.5	-37.6	10.6		2.71 ± 0.16	1.99 ± 0.14	3.26 ± 0.23	−3.30 ± 0.20	2.53 ± 0.29	4.13 ± 0.48	2.23	15.42	19.62	S
11071832637	42627840	228.7	-42.7	13.0		3.52 ± 0.35	1.24 ± 0.15	3.56 ± 0.43	−2.74 ± 0.25	1.78 ± 0.40	5.1 ± 1.1	8.41	30.62	47.05	S
11071833115	42628319	257.1	-54.5	12.0		4.44 ± 0.40	2.26 ± 0.24	3.70 ± 0.39	−2.69 ± 0.24	2.98 ± 0.62	4.8 ± 1.0	1.53	8.82	10.67	S
11071945184	42726801	248.4	-35.4	13.1		3.37 ± 0.20	3.00 ± 0.21	2.44 ± 0.17	−2.99 ± 0.17	3.97 ± 0.46	3.24 ± 0.38	1.42	5.17	8.74	S
11072037724	42805732	260.5	-24.9	8.3		3.13 ± 0.25	4.05 ± 0.38	1.65 ± 0.15	−3.11 ± 0.23	5.14 ± 0.75	2.10 ± 0.30	1.54	3.73	5.62	S
11072072282	42840283	262.0	-55.1	21.7		3.32 ± 0.34	1.00 ± 0.12	2.85 ± 0.34	−3.17 ± 0.33	1.18 ± 0.24	3.37 ± 0.71	4.19	26.71	32.59	S
11072173606	42928009	288.2	-19.4	18.9		3.51 ± 0.34	0.63 ± 0.19	0.77 ± 0.23	−2.97 ± 0.29	1.27 ± 0.38	1.56 ± 0.47	8.60	4.22	13.81	S
11072219017	42959827	269.4	-22.3	9.7		3.69 ± 0.20	2.65 ± 0.17	7.58 ± 0.50	−2.98 ± 0.17	3.17 ± 0.38	9.0 ± 1.1	1.60	9.67	21.63	M
11072372121	43099326	280.8	-11.5	11.9		3.95 ± 0.26	2.23 ± 0.17	4.56 ± 0.35	−2.70 ± 0.17	3.24 ± 0.48	6.61 ± 0.99	1.46	16.38	18.19	M
11072412187	43125788	269.6	-33.5	10.3		3.71 ± 0.31	0.45 ± 0.10	0.73 ± 0.16	−2.80 ± 0.22	0.97 ± 0.20	1.59 ± 0.32	1.70	9.54	13.00	S
11072420838	43134435	273.5	-10.7	12.6		3.63 ± 0.19	3.53 ± 0.22	5.77 ± 0.36	−2.81 ± 0.15	4.95 ± 0.59	8.09 ± 0.97	1.19	13.75	17.07	M
11072426653	43140259	298.4	-49.4	17.1		2.94 ± 0.19	2.26 ± 0.18	1.84 ± 0.14	−3.25 ± 0.22	2.65 ± 0.35	2.17 ± 0.29	2.13	4.66	8.07	S
11072448502	43162109	234.5	-44.0	8.6		3.08 ± 0.18	2.35 ± 0.16	2.88 ± 0.19	−3.26 ± 0.19	2.82 ± 0.30	3.45 ± 0.37	1.65	13.70	15.72	S
11072881092	43540281	251.2	-36.3	9.6		3.98 ± 0.45	1.40 ± 0.18	2.29 ± 0.30	−2.56 ± 0.27	2.27 ± 0.61	3.7 ± 1.0	4.03	2.87	7.73	S
11072980591	43626194	282.6	-20.0	14.9		3.57 ± 0.27	2.12 ± 0.19	3.46 ± 0.31	−2.90 ± 0.22	2.73 ± 0.45	4.45 ± 0.74	7.38	12.87	22.23	M
11073009704	43641712	280.7	0.8	7.7		3.74 ± 0.41	0.94 ± 0.12	3.09 ± 0.40	−2.59 ± 0.27	1.21 ± 0.19	3.97 ± 0.64	2.47	14.24	17.38	S
11073080387	43712390	278.5	-25.5	11.6		3.22 ± 0.14	3.72 ± 0.19	4.56 ± 0.23	−3.11 ± 0.13	4.69 ± 0.40	5.75 ± 0.49	3.01	5.06	14.31	M
11073143587	43761993	246.3	-52.2	14.0		3.23 ± 0.21	2.57 ± 0.19	2.10 ± 0.16	−3.18 ± 0.22	3.12 ± 0.40	2.55 ± 0.32	1.67	3.96	5.94	S
11073176165	43794570	277.8	-18.5	5.6		3.25 ± 0.13	3.48 ± 0.16	4.26 ± 0.20	−3.10 ± 0.13	4.37 ± 0.35	5.36 ± 0.43	1.49	6.18	13.96	M
11080109379	43814180	260.8	-40.7	9.5		3.51 ± 0.21	2.98 ± 0.21	2.43 ± 0.17	−3.01 ± 0.18	3.73 ± 0.44	3.04 ± 0.36	12.43	7.32	19.85	M
11080169376	43874173	282.2	-13.4	9.0		3.12 ± 0.14	2.88 ± 0.15	4.70 ± 0.25	−3.22 ± 0.14	3.61 ± 0.29	5.90 ± 0.47	8.77	6.88	16.34	M
11080205017	43896224	250.5	-36.1	12.4		3.45 ± 0.26	2.44 ± 0.22	1.99 ± 0.18	−2.96 ± 0.23	2.97 ± 0.50	2.43 ± 0.40	2.14	3.77	6.95	S
11080225680	43916877	165.3	-52.3	8.0	**2S_0918-549**	2.48 ± 0.21	1.58 ± 0.17	3.23 ± 0.34	−3.61 ± 0.31	1.88 ± 0.28	3.84 ± 0.58	8.25	15.58	24.47	S
11080273568	43964759	261.6	-32.0	10.4		3.13 ± 0.28	1.87 ± 0.20	2.29 ± 0.24	−3.28 ± 0.30	2.11 ± 0.36	2.59 ± 0.44	1.57	7.13	9.04	S
11080285132	43976343	242.9	-44.2	11.1		2.93 ± 0.21	1.41 ± 0.12	2.89 ± 0.26	−3.32 ± 0.24	1.64 ± 0.23	3.35 ± 0.48	4.24	16.17	21.16	M
11080344191	44021819	240.9	-31.0	8.7		3.16 ± 0.30	1.37 ± 0.16	2.80 ± 0.32	−3.10 ± 0.31	1.67 ± 0.34	3.40 ± 0.69	7.16	9.97	17.79	S
11080357422	44035027	282.1	-40.0	16.3		2.86 ± 0.14	2.02 ± 0.12	4.13 ± 0.25	−3.23 ± 0.16	2.52 ± 0.25	5.15 ± 0.51	1.24	6.87	14.58	M
11080460580	44124574	298.5	-30.5	18.2		3.35 ± 0.23	4.83 ± 0.39	1.97 ± 0.15	−3.15 ± 0.21	5.88 ± 0.73	2.40 ± 0.30	1.21	6.00	7.71	S
11080520804	44171206	251.1	-23.1	10.1		3.89 ± 0.31	4.07 ± 0.38	1.66 ± 0.15	−2.72 ± 0.21	5.8 ± 1.0	2.39 ± 0.42	1.41	4.99	6.64	S
11080521263	44171667	275.9	-58.8	16.1		2.67 ± 0.23	1.18 ± 0.13	1.92 ± 0.21	−3.42 ± 0.31	1.40 ± 0.24	2.28 ± 0.39	3.16	16.38	20.06	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10-8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
11080870913	44480512	283.2	-19.5	9.6		2.96 ± 0.14	2.53 ± 0.14	4.13 ± 0.23	−3.36 ± 0.16	2.87 ± 0.25	4.69 ± 0.42	6.95	6.77	14.25	M
11081445246	44973233	284.6	-28.5	7.1		3.00 ± 0.15	2.33 ± 0.14	3.81 ± 0.23	−3.29 ± 0.17	2.77 ± 0.26	4.52 ± 0.43	2.97	12.84	16.24	S
11081446161	44974171	182.1	-24.8	12.6		2.93 ± 0.34	1.10 ± 0.14	3.60 ± 0.48	−3.32 ± 0.39	1.29 ± 0.22	4.24 ± 0.72	2.36	7.99	11.31	S
11081572794	45087184	247.7	-32.2	11.7		3.45 ± 0.30	2.28 ± 0.22	1.86 ± 0.18	−2.99 ± 0.26	2.96 ± 0.49	2.41 ± 0.40	1.44	4.07	7.55	S
11081650987	45151795	279.8	-13.9	12.3		3.40 ± 0.25	2.79 ± 0.25	3.41 ± 0.31	−2.71 ± 0.19	4.16 ± 0.73	5.09 ± 0.90	7.03	6.35	13.92	S
11081658017	45158831	269.5	-15.1	8.0		2.86 ± 0.12	3.08 ± 0.17	6.29 ± 0.35	−3.30 ± 0.15	3.62 ± 0.32	7.39 ± 0.66	1.72	6.29	18.30	M
11081746560	45233730	298.0	-16.1	8.8		3.69 ± 0.21	2.95 ± 0.20	3.61 ± 0.25	−2.82 ± 0.17	3.96 ± 0.56	4.86 ± 0.69	7.20	5.03	13.25	S
11081807487	45281088	131.0	-51.6	6.2	**2S_0918-549**	2.863 ± 0.088	2.461 ± 0.092	9.04 ± 0.33	−3.23 ± 0.10	3.11 ± 0.19	11.46 ± 0.71	10.03	26.59	38.75	S
11082219029	45638236	215.8	-52.3	3.7		2.69 ± 0.14	2.88 ± 0.19	3.52 ± 0.23	−3.46 ± 0.19	3.29 ± 0.32	4.03 ± 0.40	6.81	11.62	20.06	S
11082260274	45679482	308.0	-31.1	9.2		3.62 ± 0.27	2.70 ± 0.24	3.30 ± 0.30	−2.80 ± 0.21	3.68 ± 0.66	4.50 ± 0.81	7.70	6.68	15.15	M
11082307171	45712763	287.2	10.3	6.4	Ser_X-1 (1.4) MXB_1906+00 (1.6) Swift_J185003.2-005627 (	2.82 ± 0.14	1.98 ± 0.12	5.67 ± 0.35	−3.38 ± 0.18	2.25 ± 0.18	6.45 ± 0.53	24.00	17.82	48.28	S
11082319464	45725063	284.6	11.9	8.0		2.61 ± 0.11	2.05 ± 0.10	7.54 ± 0.39	−3.48 ± 0.14	2.41 ± 0.16	8.85 ± 0.59	28.81	3.45	33.59	M
11082342825	45748429	290.1	-17.7	6.2		3.81 ± 0.28	2.70 ± 0.24	3.30 ± 0.30	−2.81 ± 0.21	3.07 ± 0.38	3.75 ± 0.47	5.74	4.81	12.00	S
11082424294	45816297	277.6	-17.0	9.5		3.53 ± 0.25	1.80 ± 0.15	3.68 ± 0.31	−3.05 ± 0.22	2.17 ± 0.31	4.44 ± 0.65	6.33	5.57	14.58	S
11082505691	45884088	269.0	-21.5	15.1		4.16 ± 0.36	1.67 ± 0.16	3.42 ± 0.34	−2.80 ± 0.24	2.16 ± 0.41	4.41 ± 0.85	2.84	13.15	16.41	S
11082528627	45907028	237.7	-42.4	8.7		3.43 ± 0.26	2.00 ± 0.18	4.08 ± 0.37	−2.96 ± 0.23	2.64 ± 0.42	5.39 ± 0.87	3.29	9.42	13.43	S
11082676947	46041747	286.5	-21.4	11.1		3.26 ± 0.22	2.62 ± 0.21	3.21 ± 0.25	−2.84 ± 0.19	3.77 ± 0.55	4.61 ± 0.67	6.54	8.20	14.95	S
11082785797	46136999	272.4	-11.7	7.5		3.14 ± 0.13	2.94 ± 0.14	6.01 ± 0.29	−3.21 ± 0.13	3.49 ± 0.27	7.12 ± 0.56	9.68	6.76	17.20	M
11082900776	46224784	249.6	-17.2	11.7		3.05 ± 0.28	2.90 ± 0.30	3.54 ± 0.37	−3.34 ± 0.32	3.40 ± 0.53	4.17 ± 0.65	6.73	4.73	12.33	S
11082920408	46244430	95.9	19.3	4.8		2.868 ± 0.091	3.71 ± 0.14	6.07 ± 0.23	−3.36 ± 0.11	4.31 ± 0.26	7.05 ± 0.42	2.83	12.16	15.55	S
11083028123	46338525	282.7	-14.7	11.3		2.71 ± 0.18	2.19 ± 0.17	3.59 ± 0.28	−3.42 ± 0.22	2.67 ± 0.31	4.36 ± 0.50	1.21	4.69	14.33	M
11083029431	46339827	269.0	-18.0	5.7		2.88 ± 0.15	2.72 ± 0.18	7.77 ± 0.51	−3.22 ± 0.17	3.12 ± 0.27	8.92 ± 0.78	5.14	15.49	28.66	M
11090121122	46504320	277.8	-15.0	16.2		2.92 ± 0.16	2.21 ± 0.14	3.61 ± 0.24	−3.32 ± 0.18	2.60 ± 0.27	4.25 ± 0.45	8.67	9.09	18.60	M
11090157114	46540315	253.3	-44.2	7.3		2.96 ± 0.14	2.08 ± 0.12	4.25 ± 0.24	−3.25 ± 0.16	2.59 ± 0.23	5.30 ± 0.48	4.35	12.38	18.67	S
11090226984	46596585	246.4	-57.6	14.1		3.06 ± 0.19	2.92 ± 0.23	2.38 ± 0.18	−3.10 ± 0.19	3.68 ± 0.48	3.00 ± 0.39	2.16	7.35	9.91	S
11090279595	46649195	254.5	-44.5	7.7		3.26 ± 0.19	2.44 ± 0.17	3.99 ± 0.28	−3.09 ± 0.19	2.96 ± 0.37	4.84 ± 0.61	4.65	19.55	28.80	S
11090284963	46654570	286.0	-31.4	12.8		3.92 ± 0.30	2.23 ± 0.20	3.64 ± 0.33	−2.65 ± 0.20	3.15 ± 0.60	5.15 ± 0.99	3.58	7.79	15.48	M
11090314968	46670960	330.7	-32.3	4.2		3.64 ± 0.12	3.76 ± 0.14	6.15 ± 0.24	−2.646 ± 0.077	6.45 ± 0.45	10.53 ± 0.73	10.80	6.09	17.33	M
11090328160	46684167	278.8	-8.9	9.7		2.95 ± 0.10	3.71 ± 0.16	6.06 ± 0.26	−3.32 ± 0.12	4.37 ± 0.30	7.13 ± 0.50	11.55	7.50	19.98	M
11090370949	46726953	283.3	-29.7	14.1		3.03 ± 0.19	2.46 ± 0.18	3.01 ± 0.23	−3.14 ± 0.20	3.06 ± 0.37	3.75 ± 0.46	6.82	4.96	12.41	M
11090515458	46844258	259.3	-74.8	14.1		3.22 ± 0.36	1.55 ± 0.19	1.91 ± 0.24	−2.87 ± 0.33	2.00 ± 0.32	2.46 ± 0.40	4.27	4.43	9.56	S
11090518400	46847194	179.2	68.2	16.8		4.01 ± 0.54	1.72 ± 0.26	1.40 ± 0.21	−2.74 ± 0.36	2.48 ± 0.75	2.02 ± 0.61	3.82	5.68	9.97	S
11090547911	46876717	267.1	-32.6	9.2		3.19 ± 0.29	1.64 ± 0.18	3.34 ± 0.37	−2.94 ± 0.27	2.25 ± 0.43	4.58 ± 0.88	8.98	7.01	17.02	M
11090609290	46924491	237.8	-35.8	3.8		3.16 ± 0.12	2.16 ± 0.10	13.27 ± 0.65	−3.07 ± 0.12	2.67 ± 0.22	16.4 ± 1.3	21.63	23.48	45.98	S
11090671322	46986529	271.1	-15.5	18.9		3.61 ± 0.29	1.94 ± 0.18	3.97 ± 0.38	−2.92 ± 0.25	2.29 ± 0.45	4.66 ± 0.91	9.12	6.18	15.74	M
11090683686	46998894	272.0	-38.0	24.3		4.10 ± 0.38	2.27 ± 0.24	3.70 ± 0.40	−2.50 ± 0.21	3.80 ± 0.85	6.2 ± 1.3	1.61	12.97	15.00	M
11090747789	47049387	240.4	-45.8	15.1		2.94 ± 0.21	2.79 ± 0.24	2.27 ± 0.20	−3.16 ± 0.23	3.58 ± 0.51	2.92 ± 0.42	6.18	5.50	14.15	S
11090753936	47055528	272.1	-14.6	12.3		4.20 ± 0.39	2.32 ± 0.25	2.84 ± 0.31	−2.69 ± 0.25	3.02 ± 0.70	3.70 ± 0.85	5.32	6.45	12.56	M
11090808637	47096644	290.1	-16.8	11.2		4.05 ± 0.41	1.97 ± 0.23	5.65 ± 0.67	−2.71 ± 0.27	2.68 ± 0.63	7.6 ± 1.8	12.90	5.28	18.76	M
11090816073	47104086	146.2	2.2	5.4		2.56 ± 0.12	2.06 ± 0.12	5.04 ± 0.30	−3.43 ± 0.17	2.57 ± 0.23	6.30 ± 0.57	5.83	20.13	33.90	S
11090823043	47111012	178.2	-62.3	3.5		5.15 ± 0.22	2.22 ± 0.10	19.09 ± 0.94	−2.42 ± 0.10	3.29 ± 0.37	28.2 ± 3.1	6.99	44.52	53.07	M
11091085688	47346493	273.4	-39.6	5.7		2.96 ± 0.14	2.07 ± 0.12	5.08 ± 0.30	−3.21 ± 0.15	2.49 ± 0.24	6.11 ± 0.58	6.54	9.88	17.66	S
11091104629	47351835	206.0	2.5	11.4		3.50 ± 0.34	1.21 ± 0.14	3.47 ± 0.42	−2.85 ± 0.28	1.69 ± 0.40	4.8 ± 1.1	10.43	8.75	19.58	S
11091147288	47394495	243.4	-42.5	7.8		3.51 ± 0.22	2.15 ± 0.15	3.51 ± 0.25	−3.05 ± 0.20	2.39 ± 0.23	3.91 ± 0.38	2.41	6.55	10.20	S
11091411016	47617422	292.5	-25.1	7.9		3.78 ± 0.30	2.44 ± 0.23	4.98 ± 0.48	−2.84 ± 0.24	3.03 ± 0.58	6.1 ± 1.1	4.08	5.05	9.64	S
11091450387	47656781	263.0	-28.1	4.3		3.00 ± 0.19	1.61 ± 0.12	7.25 ± 0.54	−3.37 ± 0.21	1.92 ± 0.22	8.65 ± 0.99	2.61	38.16	41.35	M
11091546433	47739234	292.9	-34.2	7.1		3.29 ± 0.20	2.10 ± 0.15	3.43 ± 0.24	−3.02 ± 0.18	2.71 ± 0.33	4.42 ± 0.55	8.47	7.22	16.32	M
11091616566	47795775	243.8	-42.2	8.1		3.96 ± 0.37	1.15 ± 0.12	3.29 ± 0.35	−2.71 ± 0.24	1.73 ± 0.35	4.9 ± 1.0	27.60	6.97	34.85	M
11091627453	47806637	240.8	-43.1	8.9		3.17 ± 0.14	3.03 ± 0.17	3.72 ± 0.20	−3.11 ± 0.14	3.74 ± 0.34	4.58 ± 0.42	4.21	9.04	14.35	S
11091733102	47898709	250.8	-56.0	12.5		3.28 ± 0.12	3.97 ± 0.18	3.24 ± 0.15	−3.12 ± 0.12	4.75 ± 0.37	3.88 ± 0.30	3.11	10.64	14.40	S
11091744699	47910302	264.5	-30.8	20.5		3.35 ± 0.30	1.92 ± 0.20	1.57 ± 0.16	−2.90 ± 0.26	2.61 ± 0.49	2.13 ± 0.40	2.44	6.06	9.53	S
11091783169	47948770	314.1	-69.3	24.5		2.32 ± 0.17	10.15 ± 0.88	16.5 ± 1.4	−4.64 ± 0.33	11.17 ± 0.94	18.2 ± 1.5	2.24	13.34	16.08	S
11091843085	47995092	235.6	-20.0	2.1		3.028 ± 0.070	4.15 ± 0.11	27.12 ± 0.75	−3.304 ± 0.076	4.81 ± 0.20	31.4 ± 1.3	13.09	50.32	74.04	M
11091954028	48092423	250.7	-37.2	11.9		3.02 ± 0.20	2.97 ± 0.23	2.42 ± 0.19	−3.28 ± 0.23	3.42 ± 0.43	2.79 ± 0.35	1.71	5.84	9.88	S
11092081572	48206372	285.9	-46.5	10.4		2.93 ± 0.17	3.57 ± 0.24	2.92 ± 0.20	−3.48 ± 0.20	4.03 ± 0.39	3.29 ± 0.32	2.65	3.69	7.01	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10-8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
11092084484	48209302	268.6	-13.1	6.6		3.13 ± 0.14	2.50 ± 0.14	5.11 ± 0.29	-3.11 ± 0.15	3.10 ± 0.30	6.34 ± 0.61	12.69	3.98	17.24	M
11092177651	48288855	286.5	-45.2	20.0		3.58 ± 0.23	2.77 ± 0.22	2.26 ± 0.18	-2.92 ± 0.20	3.45 ± 0.50	2.82 ± 0.41	2.68	8.14	11.65	S
11092212219	48309808	257.0	-37.4	8.2		3.26 ± 0.20	2.24 ± 0.16	2.74 ± 0.20	-2.91 ± 0.17	3.15 ± 0.38	3.86 ± 0.47	4.08	13.79	18.67	S
11092354011	48438016	246.1	-37.2	4.9		3.17 ± 0.15	2.02 ± 0.11	6.78 ± 0.38	-3.21 ± 0.15	2.33 ± 0.16	7.80 ± 0.55	15.87	12.81	30.66	M
11092376933	48460942	271.3	-15.2	24.8		2.93 ± 0.25	2.12 ± 0.22	2.59 ± 0.27	-3.24 ± 0.29	2.43 ± 0.41	2.98 ± 0.50	2.51	14.32	17.16	S
11092644695	48687896	271.4	-21.0	6.3		2.88 ± 0.10	3.28 ± 0.13	6.69 ± 0.28	-3.33 ± 0.11	3.85 ± 0.24	7.86 ± 0.50	3.02	26.29	29.94	M
11092810016	48826025	255.0	-27.6	9.5		3.89 ± 0.26	2.22 ± 0.16	2.72 ± 0.20	-2.88 ± 0.18	2.98 ± 0.39	3.65 ± 0.47	2.95	6.21	9.70	S
11092821861	48837867	244.9	-22.1	1.3		2.880 ± 0.084	2.627 ± 0.092	34.2 ± 1.2	-3.372 ± 0.097	2.94 ± 0.13	38.4 ± 1.7	26.17	47.10	90.94	S
11092867902	48883915	247.1	-53.9	2.7		3.61 ± 0.17	2.56 ± 0.14	6.28 ± 0.35	-2.95 ± 0.14	3.24 ± 0.32	7.93 ± 0.80	3.07	18.88	23.15	M
11092868696	48884692	244.3	-21.8	15.1		3.58 ± 0.27	2.58 ± 0.22	2.11 ± 0.18	-3.06 ± 0.23	3.11 ± 0.46	2.54 ± 0.37	2.21	1.99	6.46	S
11100104034	49079229	265.4	-37.2	14.3		3.24 ± 0.22	2.15 ± 0.17	2.64 ± 0.21	-3.08 ± 0.21	2.71 ± 0.37	3.33 ± 0.45	1.56	9.81	13.39	S
11100108727	49083930	268.1	0.7	7.2		3.18 ± 0.13	4.23 ± 0.20	6.91 ± 0.33	-3.14 ± 0.13	5.25 ± 0.41	8.57 ± 0.67	8.35	10.40	19.63	S
11100126848	49102049	270.6	-19.6	11.8		3.11 ± 0.19	2.45 ± 0.17	3.00 ± 0.21	-3.10 ± 0.18	3.22 ± 0.36	3.95 ± 0.44	3.39	6.18	11.21	S
11100257683	49219285	221.4	-52.4	7.0		2.99 ± 0.14	1.95 ± 0.11	3.99 ± 0.22	-3.10 ± 0.15	2.57 ± 0.26	5.26 ± 0.53	1.93	14.07	18.42	S
11100268089	49229711	292.4	-20.2	11.0		3.14 ± 0.16	2.64 ± 0.15	4.30 ± 0.25	-3.29 ± 0.17	3.02 ± 0.28	4.92 ± 0.46	10.91	7.46	19.39	M
11100336990	49284994	278.4	-57.3	9.4		3.94 ± 0.31	2.43 ± 0.22	2.98 ± 0.27	-2.86 ± 0.22	2.81 ± 0.33	3.44 ± 0.40	3.09	5.03	9.42	S
11100361375	49309369	260.6	-35.3	4.7		3.35 ± 0.26	1.98 ± 0.18	4.04 ± 0.37	-3.02 ± 0.24	2.47 ± 0.39	5.04 ± 0.80	2.63	16.91	20.26	S
11100430288	49364693	257.6	-36.2	7.6		2.86 ± 0.14	3.81 ± 0.22	3.11 ± 0.18	-3.37 ± 0.17	4.54 ± 0.39	3.71 ± 0.32	2.65	10.84	14.04	S
11100466552	49400959	241.5	-59.2	17.3		3.17 ± 0.15	2.78 ± 0.16	4.54 ± 0.26	-3.02 ± 0.15	3.62 ± 0.38	5.90 ± 0.62	2.98	9.09	12.57	S
11100554159	49474962	244.8	-35.6	16.4		2.93 ± 0.23	2.35 ± 0.23	2.88 ± 0.28	-3.22 ± 0.26	2.76 ± 0.45	3.37 ± 0.56	2.80	9.04	13.91	S
11100608313	49515513	240.6	-53.2	8.3		3.36 ± 0.17	2.75 ± 0.16	4.48 ± 0.27	-2.99 ± 0.16	3.06 ± 0.26	5.00 ± 0.42	2.80	14.67	18.95	S
11100618808	49526009	234.6	-78.1	16.1		2.68 ± 0.23	3.51 ± 0.34	4.29 ± 0.42	-3.71 ± 0.30	3.96 ± 0.44	4.85 ± 0.55	2.70	9.75	13.25	S
11100648243	49555444	205.8	-57.7	17.2		2.82 ± 0.28	2.33 ± 0.28	4.75 ± 0.57	-3.20 ± 0.31	2.95 ± 0.55	6.0 ± 1.1	2.69	10.85	14.30	S
11100653604	49560813	279.3	-11.3	12.0		3.03 ± 0.20	2.40 ± 0.19	2.93 ± 0.24	-3.38 ± 0.23	2.72 ± 0.34	3.33 ± 0.41	3.86	11.05	23.12	S
11100818405	49698400	271.5	-38.3	12.1		3.17 ± 0.22	2.90 ± 0.24	2.36 ± 0.19	-3.05 ± 0.20	3.77 ± 0.52	3.08 ± 0.42	1.87	6.68	10.61	S
11100846258	49726255	229.6	-64.0	16.2		3.32 ± 0.21	4.22 ± 0.31	5.17 ± 0.38	-3.06 ± 0.19	5.41 ± 0.62	6.63 ± 0.76	8.24	16.49	25.47	M
11100913049	49779454	269.8	-10.2	4.9		2.66 ± 0.11	2.99 ± 0.16	7.34 ± 0.39	-3.57 ± 0.16	3.25 ± 0.22	7.96 ± 0.54	8.12	7.09	16.71	S
11101129045	49968246	280.0	-18.5	12.2		3.94 ± 0.29	2.08 ± 0.17	3.40 ± 0.29	-2.69 ± 0.18	3.04 ± 0.47	4.97 ± 0.78	6.72	5.31	12.80	S
11101317205	50129207	194.6	-7.2	15.0		3.09 ± 0.14	7.28 ± 0.39	17.83 ± 0.97	-3.60 ± 0.16	8.78 ± 0.53	21.5 ± 1.2	6.31	35.89	50.51	S
11101322622	50134602	289.9	-14.5	5.2		2.687 ± 0.090	2.95 ± 0.11	8.42 ± 0.33	-3.61 ± 0.12	3.31 ± 0.18	9.46 ± 0.52	18.71	8.90	31.60	M
11101331936	50143941	257.0	-39.6	12.4		3.03 ± 0.18	2.74 ± 0.20	3.36 ± 0.25	-3.13 ± 0.19	3.30 ± 0.42	4.04 ± 0.51	3.87	7.75	13.00	S
11101421824	50220214	274.0	-11.4	4.4		2.90 ± 0.14	3.10 ± 0.19	6.33 ± 0.39	-3.38 ± 0.17	3.51 ± 0.33	7.17 ± 0.68	3.24	17.50	21.62	M
11101478689	50277094	232.6	-55.4	10.1		3.32 ± 0.15	3.71 ± 0.21	4.54 ± 0.26	-3.04 ± 0.14	4.71 ± 0.45	5.76 ± 0.55	2.24	14.09	16.87	S
11101683313	50454500	215.2	-65.7	2.5	**MAXI_J1421-613**	4.75 ± 0.32	1.79 ± 0.13	8.77 ± 0.68	-2.55 ± 0.16	2.66 ± 0.42	13.0 ± 2.0	2.36	50.36	53.95	S
11101744320	50501922	214.7	-32.3	3.7		1.590 ± 0.093	2.05 ± 0.17	10.05 ± 0.84	-5.24 ± 0.29	2.18 ± 0.21	10.6 ± 1.0	13.52	20.97	42.54	S
11102018791	50735602	301.2	-4.1	4.5	**XB_1940-04**	3.89 ± 0.17	3.08 ± 0.16	6.30 ± 0.34	-2.67 ± 0.12	4.52 ± 0.51	9.2 ± 1.0	11.81	28.63	50.11	S
11102049552	50766385	238.7	-50.3	10.2		3.05 ± 0.31	1.32 ± 0.16	7.04 ± 0.88	-3.24 ± 0.33	1.49 ± 0.24	7.9 ± 1.3	34.38	10.18	46.18	M
11102169451	50872654	266.0	-43.0	10.8		3.26 ± 0.17	3.57 ± 0.22	4.37 ± 0.27	-3.19 ± 0.17	4.14 ± 0.42	5.07 ± 0.51	1.08	12.57	13.92	S
11102311093	50987088	90.1	17.4	1.0		3.105 ± 0.039	6.83 ± 0.10	39.06 ± 0.61	-3.148 ± 0.041	8.35 ± 0.22	47.7 ± 1.2	14.42	33.44	53.68	S
11102314077	50990080	280.9	-9.3	9.5		3.48 ± 0.27	2.65 ± 0.25	2.16 ± 0.20	-2.88 ± 0.22	3.64 ± 0.63	2.97 ± 0.52	3.79	5.43	9.64	S
11102317740	50993736	249.1	-31.8	11.3		3.36 ± 0.24	2.31 ± 0.20	3.76 ± 0.32	-3.05 ± 0.21	2.91 ± 0.40	4.74 ± 0.66	1.98	9.65	12.09	S
11102480454	51142860	258.8	-38.9	7.1		3.16 ± 0.31	2.22 ± 0.26	3.62 ± 0.43	-3.07 ± 0.30	2.76 ± 0.55	4.50 ± 0.90	1.06	10.52	12.00	S
11102623627	51258842	284.8	-6.8	6.7		3.06 ± 0.14	3.12 ± 0.18	5.09 ± 0.30	-3.14 ± 0.15	3.79 ± 0.35	6.20 ± 0.58	12.18	11.21	25.69	M
11102735801	51357400	84.3	12.3	5.0		2.911 ± 0.094	3.76 ± 0.14	7.69 ± 0.30	-3.22 ± 0.10	4.65 ± 0.29	9.49 ± 0.61	4.36	7.24	12.93	S
11103021264	51602076	290.7	-16.6	3.4		2.97 ± 0.12	3.03 ± 0.14	6.18 ± 0.30	-3.35 ± 0.13	3.38 ± 0.21	6.91 ± 0.43	12.68	16.71	30.37	M
11103055821	51636625	262.1	-44.3	15.0		3.67 ± 0.25	2.84 ± 0.22	2.32 ± 0.18	-2.84 ± 0.19	3.74 ± 0.57	3.05 ± 0.46	3.61	4.01	8.54	S
11103085699	51666518	76.6	13.3	13.9	**4U_0614+09**	2.98 ± 0.10	4.39 ± 0.18	5.37 ± 0.22	-3.28 ± 0.11	5.27 ± 0.34	6.45 ± 0.42	2.46	10.06	12.99	S
11103128007	51695206	261.9	-18.9	5.6		2.977 ± 0.097	4.12 ± 0.16	8.42 ± 0.32	-3.27 ± 0.10	5.08 ± 0.30	10.36 ± 0.63	2.65	12.36	17.26	M
11110159342	51812949	247.1	-59.0	12.2		3.43 ± 0.19	3.66 ± 0.23	5.97 ± 0.38	-3.11 ± 0.17	4.52 ± 0.46	7.38 ± 0.75	4.98	5.58	13.48	S
11110272675	51912663	310.4	-52.5	15.0		3.48 ± 0.22	2.20 ± 0.17	2.70 ± 0.20	-2.79 ± 0.18	3.02 ± 0.46	3.70 ± 0.57	1.57	20.09	22.44	M
11110382280	52008685	258.0	44.2	14.9	**UW_Crb**	2.56 ± 0.31	1.81 ± 0.25	3.71 ± 0.52	-3.62 ± 0.42	2.17 ± 0.37	4.42 ± 0.76	4.96	7.73	13.70	S
11110425959	52038760	252.8	-35.1	9.9		3.62 ± 0.28	1.97 ± 0.17	3.22 ± 0.28	-2.87 ± 0.22	2.67 ± 0.41	4.37 ± 0.67	3.19	6.31	10.96	S
11110459171	52071972	257.8	-9.1	6.9		2.65 ± 0.21	2.36 ± 0.23	4.83 ± 0.47	-3.37 ± 0.25	2.89 ± 0.38	5.89 ± 0.79	1.30	18.23	21.61	M
11110483426	52096238	257.7	-36.8	4.7		3.269 ± 0.094	5.28 ± 0.17	6.46 ± 0.21	-3.129 ± 0.091	6.65 ± 0.34	8.14 ± 0.42	5.60	9.30	17.48	S
11110631260	52216853	94.4	9.8	8.6	**4U_0614+09**	2.945 ± 0.063	5.19 ± 0.13	10.59 ± 0.27	-3.315 ± 0.073	6.20 ± 0.25	12.66 ± 0.52	5.22	11.26	17.05	S
11111210226	52714235	254.9	-47.0	7.5		3.30 ± 0.25	2.37 ± 0.21	2.90 ± 0.26	-2.93 ± 0.21	2.88 ± 0.33	3.53 ± 0.40	1.77	12.59	14.60	M
11111220220	52724232	248.4	-35.4	13.7		2.69 ± 0.20	4.87 ± 0.42	5.96 ± 0.52	-3.87 ± 0.30	5.35 ± 0.55	6.55 ± 0.68	2.77	11.95	17.01	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10-8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
11111244138	52748136	267.4	-10.9	10.1		3.16 ± 0.30	1.62 ± 0.18	1.98 ± 0.22	−3.17 ± 0.28	2.08 ± 0.35	2.54 ± 0.42	2.65	4.80	8.04	S
11111410201	52886993	245.4	-45.3	6.7		3.02 ± 0.16	2.57 ± 0.17	5.25 ± 0.35	−3.14 ± 0.17	3.10 ± 0.34	6.32 ± 0.70	4.42	11.52	16.47	S
11111466708	52943510	257.8	-26.3	10.3		3.51 ± 0.30	3.75 ± 0.37	3.06 ± 0.30	−3.46 ± 0.32	3.62 ± 0.59	2.95 ± 0.48	1.68	6.57	8.52	S
11111949442	53358250	287.4	-3.9	10.6		3.31 ± 0.15	2.70 ± 0.14	5.52 ± 0.30	−2.99 ± 0.14	3.17 ± 0.23	6.47 ± 0.48	12.70	12.29	25.57	M
11112341768	53696181	278.2	-11.1	8.3		3.01 ± 0.14	3.19 ± 0.17	6.51 ± 0.36	−3.26 ± 0.15	3.64 ± 0.26	7.43 ± 0.53	5.13	8.03	21.19	S
11112371308	53725720	251.4	-46.1	6.6		2.918 ± 0.084	4.18 ± 0.14	5.12 ± 0.17	−3.38 ± 0.10	4.85 ± 0.21	5.94 ± 0.26	1.83	4.59	16.59	M
11112379694	53734099	213.5	-25.5	1.2		1.735 ± 0.047	6.49 ± 0.25	13.24 ± 0.52	−4.84 ± 0.12	6.80 ± 0.31	13.86 ± 0.65	8.59	33.13	44.17	S
11112529826	53857028	277.5	-9.9	7.1		3.01 ± 0.11	4.17 ± 0.18	6.82 ± 0.30	−3.25 ± 0.12	5.07 ± 0.35	8.29 ± 0.58	4.43	8.08	14.43	S
11112673475	53987067	247.8	-54.1	7.7		3.37 ± 0.14	4.25 ± 0.21	3.47 ± 0.17	−3.08 ± 0.13	5.20 ± 0.45	4.25 ± 0.37	2.80	11.26	14.68	S
11112703291	54003288	296.3	-12.3	12.8		2.94 ± 0.11	3.14 ± 0.15	6.40 ± 0.31	−3.34 ± 0.13	3.49 ± 0.27	7.13 ± 0.56	2.51	14.55	17.62	S
11113021780	54280985	270.8	-37.6	4.5		2.894 ± 0.069	5.11 ± 0.14	16.69 ± 0.48	−3.369 ± 0.094	6.29 ± 0.31	20.5 ± 1.0	17.43	5.06	31.49	S
11120216537	54448536	106.2	-14.4	11.7		2.93 ± 0.11	4.88 ± 0.22	3.98 ± 0.18	−3.27 ± 0.12	6.00 ± 0.42	4.90 ± 0.34	2.01	12.47	14.92	S
11120517108	54708312	290.1	-66.2	15.5		3.57 ± 0.33	2.12 ± 0.23	1.73 ± 0.19	−2.85 ± 0.26	2.93 ± 0.60	2.39 ± 0.49	2.62	5.04	8.36	S
11121262935	55358948	286.1	-14.2	5.2		2.96 ± 0.10	3.04 ± 0.12	7.44 ± 0.31	−3.27 ± 0.11	3.70 ± 0.25	9.07 ± 0.61	12.40	12.59	28.37	S
11121347424	55429829	92.6	6.9	3.5	**4U_0614+09**	3.290 ± 0.065	7.36 ± 0.17	12.02 ± 0.28	−3.120 ± 0.063	9.05 ± 0.35	14.78 ± 0.57	3.85	12.45	17.34	S
11121426703	55495512	324.5	-14.6	19.0		3.19 ± 0.19	2.56 ± 0.18	3.14 ± 0.22	−2.98 ± 0.17	3.05 ± 0.29	3.73 ± 0.35	7.87	5.33	14.03	M
11121631212	55672803	227.9	-60.8	5.5	Cir_X-1 (0.7) MAXI_J1421-613 (1.1)	3.056 ± 0.097	2.99 ± 0.11	9.78 ± 0.38	−3.080 ± 0.098	3.84 ± 0.25	12.54 ± 0.81	2.38	20.35	24.08	M
11122006005	55993207	252.8	-53.6	3.3		3.12 ± 0.12	4.42 ± 0.21	5.41 ± 0.26	−3.16 ± 0.12	5.22 ± 0.41	6.38 ± 0.50	5.62	8.39	15.48	S
11122409854	56342662	142.6	-62.7	3.5		3.36 ± 0.10	3.50 ± 0.13	21.47 ± 0.80	−3.03 ± 0.10	4.35 ± 0.28	26.6 ± 1.7	38.54	45.61	92.63	S
11122561717	56480921	255.8	-50.9	9.6		3.31 ± 0.22	4.39 ± 0.33	3.58 ± 0.27	−3.25 ± 0.22	4.91 ± 0.47	4.01 ± 0.38	2.57	7.35	10.88	S
11122965280	56830072	242.3	-63.5	6.7		2.93 ± 0.10	2.94 ± 0.13	4.80 ± 0.21	−3.29 ± 0.12	3.55 ± 0.25	5.79 ± 0.41	9.96	5.69	17.24	M
11123001775	56852984	261.7	-22.4	2.5		3.005 ± 0.093	5.03 ± 0.18	8.21 ± 0.30	−3.24 ± 0.10	6.00 ± 0.34	9.79 ± 0.56	4.95	7.84	14.30	S
11123108393	56945994	241.0	3.5	12.4	**UW_Crb**	3.83 ± 0.40	1.82 ± 0.21	2.23 ± 0.26	−2.77 ± 0.28	2.15 ± 0.32	2.63 ± 0.39	2.41	7.85	10.68	S
12010125204	57049204	253.0	-53.9	9.1		3.32 ± 0.13	2.67 ± 0.12	5.45 ± 0.24	−3.01 ± 0.11	3.22 ± 0.18	6.57 ± 0.38	10.90	7.74	20.00	M
12010349431	57246235	241.6	-51.3	8.9		3.226 ± 0.092	3.63 ± 0.12	5.93 ± 0.19	−3.085 ± 0.090	4.71 ± 0.26	7.69 ± 0.42	4.03	14.55	22.10	S
12010510557	57380169	254.1	-26.5	8.4		2.522 ± 0.092	5.41 ± 0.24	4.41 ± 0.20	−3.58 ± 0.13	6.16 ± 0.35	5.02 ± 0.28	3.20	6.03	11.75	S
12011300699	58061503	253.8	-47.7	9.4		3.29 ± 0.13	4.36 ± 0.20	3.56 ± 0.16	−3.09 ± 0.12	5.19 ± 0.30	4.23 ± 0.24	2.45	10.13	14.61	S
12011425954	58173163	233.8	-54.2	8.6		3.47 ± 0.21	2.69 ± 0.19	3.29 ± 0.23	−2.99 ± 0.18	3.04 ± 0.29	3.72 ± 0.35	2.30	8.25	11.53	S
12011604750	58324761	208.2	-60.9	14.0		3.46 ± 0.19	2.65 ± 0.17	3.24 ± 0.21	−2.98 ± 0.16	3.11 ± 0.26	3.81 ± 0.32	2.50	7.20	10.75	S
12011985545	58664755	287.2	6.6	9.9		2.70 ± 0.19	1.39 ± 0.11	3.97 ± 0.34	−3.36 ± 0.24	1.65 ± 0.18	4.72 ± 0.52	14.44	20.23	38.30	S
12012052670	58718246	282.9	-24.6	6.1		2.66 ± 0.13	2.50 ± 0.14	6.13 ± 0.36	−3.49 ± 0.17	2.97 ± 0.22	7.28 ± 0.55	9.68	18.55	29.56	S
12012420137	59031336	252.3	-41.7	10.8		3.14 ± 0.15	2.03 ± 0.12	5.80 ± 0.34	−3.20 ± 0.16	2.18 ± 0.18	6.24 ± 0.52	3.50	15.26	19.41	S
12012529937	59127535	274.0	-21.6	9.7		3.06 ± 0.24	2.35 ± 0.22	2.88 ± 0.28	−3.18 ± 0.26	2.69 ± 0.34	3.29 ± 0.42	5.76	5.89	11.70	S
12020123197	59725598	271.3	-37.0	11.9		3.46 ± 0.26	2.18 ± 0.20	2.97 ± 0.27	−2.88 ± 0.21	2.99 ± 0.47	4.07 ± 0.65	3.01	9.25	12.97	S
12020166915	59769323	244.6	-48.0	4.9		2.986 ± 0.086	3.38 ± 0.11	8.29 ± 0.28	−3.279 ± 0.096	4.04 ± 0.21	9.91 ± 0.53	17.18	7.76	25.68	M
12020217602	59806407	270.4	-12.5	8.1		2.68 ± 0.12	2.53 ± 0.14	6.20 ± 0.35	−3.53 ± 0.16	2.76 ± 0.23	6.76 ± 0.58	13.34	9.44	23.10	M
12020352288	59927485	242.5	-24.3	21.9		3.31 ± 0.22	3.64 ± 0.28	2.97 ± 0.23	−2.97 ± 0.19	4.91 ± 0.67	4.01 ± 0.55	2.51	5.16	8.27	S
12020448807	60010410	240.6	-29.2	19.0		3.37 ± 0.27	1.98 ± 0.18	2.42 ± 0.22	−3.17 ± 0.26	2.12 ± 0.27	2.60 ± 0.33	4.57	3.47	10.13	S
12020477464	60039062	217.9	-31.6	16.4		3.61 ± 0.31	3.07 ± 0.31	2.50 ± 0.25	−2.92 ± 0.25	3.93 ± 0.69	3.21 ± 0.56	3.93	3.44	8.80	S
12020644376	60178770	223.5	-51.7	20.3		4.23 ± 0.43	2.82 ± 0.32	2.30 ± 0.26	−2.68 ± 0.27	3.16 ± 0.47	2.57 ± 0.38	1.61	9.21	11.06	S
12020676957	60211361	234.2	-28.3	19.0		3.33 ± 0.20	3.64 ± 0.27	2.97 ± 0.22	−2.99 ± 0.18	4.18 ± 0.40	3.41 ± 0.33	2.83	5.66	10.79	S
12021852108	61223312	91.5	5.4	6.2	**4U_0614+09**	3.194 ± 0.084	4.98 ± 0.15	10.18 ± 0.31	−3.130 ± 0.083	6.14 ± 0.32	12.54 ± 0.65	6.31	9.90	16.99	S
12021853236	61224438	249.0	-36.0	11.2		3.20 ± 0.14	2.38 ± 0.12	3.89 ± 0.20	−3.08 ± 0.14	3.10 ± 0.28	5.07 ± 0.47	3.61	8.08	14.21	S
12021982707	61340307	237.9	-55.1	8.0		2.93 ± 0.15	2.75 ± 0.17	4.48 ± 0.29	−3.26 ± 0.17	3.34 ± 0.33	5.45 ± 0.54	1.62	10.08	12.05	S
12022029147	61373132	226.1	-53.4	9.8		3.45 ± 0.18	3.03 ± 0.18	2.47 ± 0.14	−2.93 ± 0.16	4.10 ± 0.45	3.34 ± 0.37	2.79	5.53	9.35	S
12022229055	61545867	238.2	-59.6	8.9		2.96 ± 0.18	1.88 ± 0.14	3.08 ± 0.22	−3.21 ± 0.20	2.27 ± 0.28	3.71 ± 0.46	3.00	7.84	13.07	S
12022252065	61568864	259.4	-60.5	8.7		3.31 ± 0.21	2.18 ± 0.16	2.67 ± 0.20	−3.04 ± 0.20	2.64 ± 0.37	3.23 ± 0.45	1.63	9.69	11.79	S
12022320714	61623911	279.2	-15.6	4.8		3.09 ± 0.10	4.00 ± 0.16	4.90 ± 0.19	−3.23 ± 0.11	4.79 ± 0.30	5.87 ± 0.37	2.52	13.85	16.75	M
12022347176	61650380	222.4	-68.6	6.7		2.95 ± 0.36	5.09 ± 0.70	4.15 ± 0.57	−3.67 ± 0.44	5.88 ± 0.99	4.80 ± 0.80	1.96	8.51	10.80	M
12022557788	61833784	254.6	-56.9	6.9		3.20 ± 0.14	3.73 ± 0.20	4.56 ± 0.25	−3.12 ± 0.14	4.54 ± 0.41	5.56 ± 0.50	5.28	6.41	12.21	M
12022649760	61912167	237.6	-58.1	8.7		3.29 ± 0.16	3.29 ± 0.18	2.69 ± 0.15	−3.04 ± 0.15	4.28 ± 0.42	3.50 ± 0.34	2.03	4.27	8.43	S
12022745314	61994114	237.1	-54.8	4.9		3.55 ± 0.15	4.92 ± 0.26	4.01 ± 0.21	−2.95 ± 0.13	6.39 ± 0.57	5.21 ± 0.46	2.63	8.87	13.60	S
12022801851	62037049	254.6	-34.7	7.6		2.88 ± 0.15	2.79 ± 0.18	3.42 ± 0.22	−3.37 ± 0.19	3.31 ± 0.34	4.06 ± 0.42	1.26	10.51	14.08	S
12022861929	62097135	271.9	-17.4	8.1		3.06 ± 0.13	2.63 ± 0.13	5.37 ± 0.27	−3.14 ± 0.13	3.29 ± 0.26	6.72 ± 0.54	12.63	6.03	19.09	M
12022933523	62155127	244.0	-44.3	2.9		2.82 ± 0.15	2.80 ± 0.18	5.71 ± 0.38	−3.52 ± 0.19	3.10 ± 0.29	6.34 ± 0.61	2.26	11.39	14.07	S
12022938463	62160066	100.5	6.1	6.1	**4U_0614+09**	3.43 ± 0.13	3.88 ± 0.17	4.76 ± 0.21	−2.92 ± 0.11	5.20 ± 0.44	6.37 ± 0.54	1.59	10.83	12.73	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10-8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
12022979307	62200915	246.0	-46.8	8.6		3.43 ± 0.29	2.65 ± 0.26	2.16 ± 0.22	-3.00 ± 0.25	3.50 ± 0.58	2.86 ± 0.48	1.40	8.99	10.60	S
12030243575	62337973	220.7	-44.8	5.2		3.29 ± 0.13	4.51 ± 0.21	5.51 ± 0.26	-3.03 ± 0.12	5.65 ± 0.44	6.91 ± 0.54	1.39	11.35	13.04	M
12030442285	62509488	258.6	-38.9	11.1		3.45 ± 0.22	2.28 ± 0.17	2.79 ± 0.20	-2.90 ± 0.19	3.00 ± 0.40	3.68 ± 0.49	1.98	4.80	10.86	S
12030474123	62541320	241.9	-52.5	6.3		3.48 ± 0.16	2.74 ± 0.15	4.49 ± 0.25	-2.90 ± 0.14	3.69 ± 0.39	6.03 ± 0.64	1.45	8.27	9.97	S
12030603939	62643934	224.2	-53.4	8.5		2.77 ± 0.10	2.72 ± 0.12	4.45 ± 0.20	-3.51 ± 0.14	3.13 ± 0.21	5.11 ± 0.34	3.33	7.32	11.45	S
12030804891	62817689	7.4	-55.6	12.4		1.90 ± 0.13	1.84 ± 0.16	3.01 ± 0.26	-4.45 ± 0.30	2.11 ± 0.22	3.44 ± 0.36	3.10	8.91	12.74	S
12030820998	62833780	346.0	-1.9	8.1		2.79 ± 0.14	2.63 ± 0.15	3.22 ± 0.19	-3.43 ± 0.18	3.21 ± 0.27	3.92 ± 0.34	5.58	15.05	22.81	S
12031112902	63084906	257.1	-19.3	7.5		3.51 ± 0.43	3.74 ± 0.53	3.05 ± 0.43	-2.77 ± 0.32	5.6 ± 1.4	4.6 ± 1.1	3.95	21.39	26.14	M
12031180234	63152241	208.4	-45.6	6.4		2.86 ± 0.14	3.34 ± 0.20	4.09 ± 0.24	-3.39 ± 0.17	3.87 ± 0.35	4.74 ± 0.43	2.96	5.58	10.67	S
12031323810	63268630	271.7	-19.0	5.7		2.99 ± 0.12	3.02 ± 0.14	7.39 ± 0.36	-3.34 ± 0.14	3.46 ± 0.26	8.48 ± 0.63	10.82	7.43	19.02	M
12031555740	63473350	234.7	-15.3	16.2		3.95 ± 0.44	2.30 ± 0.30	1.88 ± 0.24	-2.74 ± 0.30	3.07 ± 0.74	2.50 ± 0.60	1.02	11.03	12.14	S
12031728262	63618663	237.0	-39.6	8.6		3.48 ± 0.17	3.09 ± 0.18	5.05 ± 0.30	-2.97 ± 0.15	3.95 ± 0.42	6.45 ± 0.68	7.06	11.40	19.52	M
12031853042	63729842	96.9	6.7	5.4	**4U_0614+09**	3.474 ± 0.085	5.74 ± 0.16	9.37 ± 0.26	-3.046 ± 0.076	7.23 ± 0.34	11.80 ± 0.56	1.60	12.48	16.34	S
12032639643	64407644	257.4	-55.0	9.4		2.77 ± 0.14	2.58 ± 0.16	5.26 ± 0.34	-3.47 ± 0.19	2.93 ± 0.28	5.99 ± 0.58	13.43	1.90	16.71	M
12032784515	64538912	281.4	-31.3	11.8		3.49 ± 0.23	2.11 ± 0.16	3.44 ± 0.27	-3.00 ± 0.20	2.67 ± 0.36	4.37 ± 0.60	4.31	4.42	14.89	M
12040376157	65135351	235.3	-39.9	10.6		3.51 ± 0.21	3.15 ± 0.22	3.86 ± 0.27	-2.99 ± 0.17	3.91 ± 0.48	4.78 ± 0.59	2.29	6.67	9.45	S
12040845203	65536410	277.2	-5.9	7.8		3.38 ± 0.12	3.64 ± 0.15	5.94 ± 0.25	-3.14 ± 0.12	4.35 ± 0.30	7.10 ± 0.49	3.46	6.50	18.13	M
12040900574	65578179	284.1	-19.7	9.5		3.00 ± 0.19	2.97 ± 0.23	2.43 ± 0.18	-3.18 ± 0.20	3.63 ± 0.45	2.96 ± 0.37	1.90	2.12	8.00	S
12040979323	65656908	225.8	-48.5	6.6		3.22 ± 0.24	2.84 ± 0.26	2.32 ± 0.21	-3.01 ± 0.22	3.70 ± 0.57	3.02 ± 0.46	3.27	9.26	13.29	S
12041022229	65686232	253.0	-60.2	11.9		2.67 ± 0.19	2.49 ± 0.23	2.03 ± 0.19	-3.33 ± 0.24	3.09 ± 0.43	2.52 ± 0.35	2.61	3.73	7.38	S
12041066875	65730881	264.5	-16.4	3.8		3.28 ± 0.12	3.97 ± 0.17	6.48 ± 0.28	-3.22 ± 0.12	4.53 ± 0.31	7.40 ± 0.51	9.57	5.21	17.11	M
12041453395	66063003	259.0	-29.2	8.8		3.88 ± 0.25	3.29 ± 0.24	2.68 ± 0.20	-2.71 ± 0.16	4.66 ± 0.64	3.81 ± 0.52	3.18	5.45	9.51	S
12041581995	66177998	255.6	-44.9	18.3		3.14 ± 0.18	2.46 ± 0.17	3.01 ± 0.21	-3.14 ± 0.18	3.04 ± 0.36	3.71 ± 0.44	6.37	4.15	11.04	S
12041673407	66255794	274.8	-15.7	10.7		4.30 ± 0.30	2.14 ± 0.18	2.63 ± 0.22	-2.45 ± 0.17	3.76 ± 0.76	4.61 ± 0.94	2.66	3.95	7.61	S
12041677052	66259458	219.7	-60.7	8.4		3.13 ± 0.15	3.58 ± 0.20	2.92 ± 0.16	-3.16 ± 0.15	4.43 ± 0.40	3.61 ± 0.32	2.16	8.72	11.23	S
12041801595	66356803	255.6	-18.4	8.3		2.85 ± 0.14	3.02 ± 0.19	6.16 ± 0.40	-3.37 ± 0.17	3.38 ± 0.34	6.90 ± 0.69	9.61	6.71	18.24	M
12041815966	66371166	274.9	-51.2	9.0		3.89 ± 0.12	5.81 ± 0.21	4.74 ± 0.17	-2.716 ± 0.081	8.70 ± 0.60	7.10 ± 0.49	2.55	6.91	12.44	S
12041830266	66385457	234.8	-47.9	10.8		3.09 ± 0.19	3.14 ± 0.24	2.56 ± 0.20	-3.12 ± 0.19	3.86 ± 0.49	3.15 ± 0.40	2.80	4.65	8.00	S
12041832770	66387968	27.3	-2.0	6.7		3.12 ± 0.10	4.05 ± 0.15	4.97 ± 0.19	-3.14 ± 0.10	5.30 ± 0.32	6.50 ± 0.39	2.63	10.94	14.05	S
12042226680	66727495	150.1	-59.5	8.5	**2S_0918-549**	3.05 ± 0.13	2.64 ± 0.14	4.32 ± 0.23	-3.21 ± 0.14	3.20 ± 0.28	5.23 ± 0.47	6.10	16.52	23.86	S
12042503987	66963989	273.3	-7.2	15.6		2.93 ± 0.17	2.68 ± 0.20	4.37 ± 0.33	-3.22 ± 0.19	3.19 ± 0.39	5.21 ± 0.63	12.50	17.13	31.01	M
12042612757	67059164	260.3	-51.6	5.3		2.895 ± 0.077	2.946 ± 0.094	8.42 ± 0.26	-3.329 ± 0.092	3.53 ± 0.18	10.11 ± 0.51	16.00	15.05	35.63	M
12042811927	67231121	262.6	-40.2	11.5		3.79 ± 0.19	2.36 ± 0.14	2.89 ± 0.17	-2.74 ± 0.14	3.41 ± 0.42	4.18 ± 0.52	2.39	6.06	9.73	S
12043035741	67427734	252.4	-49.5	6.9		3.34 ± 0.15	3.75 ± 0.20	3.07 ± 0.16	-3.05 ± 0.14	4.76 ± 0.44	3.89 ± 0.35	2.95	5.24	10.61	S
12050206263	67571061	272.0	-15.7	5.9		3.05 ± 0.13	3.47 ± 0.19	7.08 ± 0.39	-3.17 ± 0.14	4.06 ± 0.37	8.28 ± 0.76	2.08	13.29	15.82	M
12050224478	67589284	239.5	-52.8	4.1		3.42 ± 0.15	4.61 ± 0.24	3.76 ± 0.19	-3.01 ± 0.13	5.89 ± 0.51	4.81 ± 0.41	6.84	5.22	13.85	S
12050380994	67732197	262.6	-14.2	11.4		2.760 ± 0.099	4.22 ± 0.18	6.90 ± 0.30	-3.53 ± 0.12	4.59 ± 0.29	7.50 ± 0.48	2.61	16.18	19.23	M
12050706763	68003565	41.5	19.4	6.9		3.013 ± 0.097	5.62 ± 0.20	4.58 ± 0.16	-3.32 ± 0.10	6.92 ± 0.38	5.65 ± 0.31	2.67	5.57	8.75	S
12051759928	68920728	256.9	-39.5	18.4		3.25 ± 0.25	3.02 ± 0.26	2.46 ± 0.21	-3.14 ± 0.25	3.82 ± 0.56	3.12 ± 0.45	1.53	7.58	10.89	S
12051938836	69072442	263.5	-22.1	8.8		3.44 ± 0.14	3.60 ± 0.18	5.87 ± 0.29	-3.04 ± 0.13	4.37 ± 0.38	7.13 ± 0.62	3.30	5.87	17.34	M
12052156800	69263197	273.8	-12.3	7.0		2.49 ± 0.31	0.80 ± 0.12	1.63 ± 0.24	-3.88 ± 0.46	0.88 ± 0.17	1.80 ± 0.36	11.09	8.29	20.22	M
12052160737	69267142	296.4	-23.3	18.6		3.97 ± 0.25	3.54 ± 0.27	2.89 ± 0.22	-2.68 ± 0.17	5.10 ± 0.78	4.16 ± 0.63	13.32	9.40	23.49	M
12052167872	69274267	255.1	-43.9	9.8		3.17 ± 0.19	2.69 ± 0.19	3.30 ± 0.23	-3.24 ± 0.20	3.06 ± 0.35	3.75 ± 0.43	1.32	15.20	16.70	M
12052378266	69457468	265.9	-28.4	22.2		3.62 ± 0.30	2.73 ± 0.26	2.23 ± 0.21	-2.94 ± 0.24	3.52 ± 0.60	2.87 ± 0.48	6.36	3.93	10.65	M
12052654559	69692965	248.6	-47.8	9.3		3.12 ± 0.14	2.60 ± 0.13	5.31 ± 0.28	-3.17 ± 0.14	3.22 ± 0.26	6.58 ± 0.54	6.83	12.05	19.72	M
12053076891	70060917	272.5	-36.5	14.6		3.48 ± 0.36	1.92 ± 0.22	3.14 ± 0.37	-2.82 ± 0.30	2.68 ± 0.59	4.38 ± 0.97	7.20	3.46	11.62	M
12053112283	70082682	271.4	-6.7	7.8		3.08 ± 0.11	4.18 ± 0.19	5.12 ± 0.23	-3.25 ± 0.12	4.93 ± 0.34	6.04 ± 0.42	1.38	12.19	15.51	M
12060186305	70243110	267.6	-50.6	9.3		3.13 ± 0.17	2.75 ± 0.17	3.36 ± 0.21	-3.18 ± 0.17	3.29 ± 0.34	4.03 ± 0.42	4.23	11.63	16.79	S
12060277525	70320722	271.6	-38.6	18.5		3.38 ± 0.20	2.03 ± 0.14	2.49 ± 0.17	-2.88 ± 0.18	2.88 ± 0.39	3.53 ± 0.48	4.87	7.39	13.38	S
12060467243	70483248	232.7	-31.9	11.5		3.73 ± 0.27	2.02 ± 0.17	3.30 ± 0.28	-2.68 ± 0.18	3.11 ± 0.48	5.07 ± 0.79	3.13	6.69	10.72	S
12060479182	70495187	272.0	-34.3	11.6		2.68 ± 0.15	2.17 ± 0.15	3.54 ± 0.25	-3.34 ± 0.19	2.64 ± 0.28	4.31 ± 0.46	11.53	5.37	17.58	M
12060520368	70522758	250.1	-31.9	14.6		4.64 ± 0.34	3.95 ± 0.34	3.22 ± 0.28	-2.51 ± 0.17	6.0 ± 1.0	4.93 ± 0.88	1.30	14.54	16.08	S
12060703785	70678982	286.4	-44.9	16.9		3.13 ± 0.22	2.64 ± 0.22	2.16 ± 0.18	-3.03 ± 0.21	3.40 ± 0.49	2.78 ± 0.40	1.21	4.13	7.55	S
12060724566	70699753	264.1	-29.1	7.3		3.82 ± 0.26	1.83 ± 0.14	2.99 ± 0.23	-2.86 ± 0.19	2.46 ± 0.34	4.02 ± 0.56	1.40	8.17	9.83	S
12060771322	70746526	267.5	-13.4	9.0		2.70 ± 0.13	2.61 ± 0.15	4.26 ± 0.25	-3.56 ± 0.18	2.89 ± 0.25	4.72 ± 0.42	13.11	5.81	19.20	M
12060876579	70838192	267.7	-43.8	6.4		2.92 ± 0.19	3.18 ± 0.25	3.89 ± 0.31	-3.48 ± 0.24	3.50 ± 0.41	4.28 ± 0.51	4.37	5.86	10.92	S
12060912166	70860179	259.1	-31.4	9.6		3.91 ± 0.23	3.10 ± 0.21	2.53 ± 0.17	-2.84 ± 0.16	4.12 ± 0.50	3.36 ± 0.41	1.67	15.16	17.04	S

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak s	Ra	Dec	Error	Name(distance) (sigma)	BB temp keV	BB flux $10-8$ erg cm^{-2} s^{-1}	BB Flnc 10^{-7}erg cm^{-2}	PL index	PL Flux 10^{-8}erg cm^{-2} s^{-1}	PL Flnc 10^{-7} erg cm^{-2}	Rise sec	Fall sec	Duration sec	Structure
12060978999	70927004	296.3	-20.8	9.8		3.35 ± 0.20	2.48 ± 0.17	2.02 ± 0.14	−2.94 ± 0.18	3.44 ± 0.46	2.81 ± 0.37	5.27	5.87	11.73	S
12061037904	70972312	291.1	-34.2	12.2		3.96 ± 0.26	3.13 ± 0.23	2.55 ± 0.19	−2.84 ± 0.18	4.12 ± 0.58	3.37 ± 0.47	1.17	1.50	6.99	S
12061046834	70981236	246.1	-44.3	19.9		4.38 ± 0.65	2.84 ± 0.49	1.16 ± 0.20	−2.31 ± 0.29	5.8 ± 2.0	2.39 ± 0.84	2.16	3.62	6.30	S
12061169763	71090564	301.6	-7.0	8.6		3.19 ± 0.24	2.88 ± 0.27	2.35 ± 0.22	−2.93 ± 0.22	3.98 ± 0.64	3.24 ± 0.52	2.87	3.55	7.32	S
12061414005	71294010	240.9	-49.9	9.6		3.01 ± 0.16	2.25 ± 0.14	2.76 ± 0.17	−3.34 ± 0.19	2.69 ± 0.27	3.30 ± 0.33	6.57	9.66	16.72	S
12061500509	71366914	248.3	-34.3	16.5		3.01 ± 0.19	2.31 ± 0.17	2.83 ± 0.21	−3.31 ± 0.21	2.60 ± 0.31	3.18 ± 0.38	2.64	11.57	15.00	S
12061645397	71498192	289.7	-10.4	11.1		4.00 ± 0.32	2.83 ± 0.26	2.31 ± 0.21	−2.79 ± 0.23	3.61 ± 0.66	2.94 ± 0.54	8.51	11.80	20.71	M
12061704677	71543876	261.4	-12.8	9.0		3.38 ± 0.15	4.56 ± 0.24	5.59 ± 0.30	−2.98 ± 0.12	5.77 ± 0.51	7.06 ± 0.62	10.34	4.99	16.64	M
12061719792	71559009	242.1	-45.0	7.1		3.51 ± 0.17	2.26 ± 0.13	3.70 ± 0.21	−2.94 ± 0.15	2.96 ± 0.30	4.84 ± 0.50	10.17	8.53	19.01	S
12061848606	71674202	282.4	-14.9	10.1		4.62 ± 0.48	2.10 ± 0.24	1.71 ± 0.20	−2.57 ± 0.25	3.14 ± 0.76	2.56 ± 0.62	2.50	2.00	5.26	S
12061860411	71686009	95.1	22.1	9.8	**4U_0614+09**	3.008 ± 0.086	5.05 ± 0.16	14.44 ± 0.48	−3.279 ± 0.092	6.35 ± 0.31	18.15 ± 0.90	8.61	11.74	24.37	S
12062005676	71804073	92.2	0.1	6.2	**4U_0614+09**	3.26 ± 0.10	4.72 ± 0.18	5.78 ± 0.22	−3.05 ± 0.10	6.12 ± 0.39	7.49 ± 0.48	1.39	7.45	10.93	S
12062060270	71858667	254.4	-26.3	12.2		3.30 ± 0.24	2.74 ± 0.23	2.24 ± 0.19	−3.04 ± 0.22	3.41 ± 0.49	2.79 ± 0.40	2.21	4.54	7.05	S
12062073109	71871513	243.6	-8.9	15.2		3.17 ± 0.18	6.09 ± 0.41	2.48 ± 0.16	−3.39 ± 0.20	6.87 ± 0.66	2.80 ± 0.26	2.67	3.51	6.82	S
12062202802	71974009	253.0	-23.8	12.3		3.75 ± 0.40	2.21 ± 0.27	1.80 ± 0.22	−3.06 ± 0.31	2.65 ± 0.53	2.16 ± 0.43	2.93	6.94	10.48	S
12062202901	71974116	258.2	-44.8	5.2		3.33 ± 0.21	1.93 ± 0.14	3.95 ± 0.30	−3.07 ± 0.20	2.38 ± 0.31	4.86 ± 0.65	14.30	13.05	30.16	S
12062254849	72026068	279.3	0.7	6.7		3.11 ± 0.13	3.47 ± 0.18	4.25 ± 0.22	−3.20 ± 0.14	4.23 ± 0.34	5.18 ± 0.42	1.99	5.83	18.05	S
12062371989	72129600	239.8	-33.6	12.1		3.67 ± 0.24	4.62 ± 0.35	1.88 ± 0.14	−2.71 ± 0.17	6.91 ± 0.95	2.82 ± 0.38	2.72	3.83	8.22	S
12062662290	72379085	265.3	-27.7	5.6		3.97 ± 0.31	2.68 ± 0.23	2.19 ± 0.19	−2.64 ± 0.19	4.15 ± 0.70	3.38 ± 0.57	2.77	5.54	8.71	S
12062716118	72419318	254.4	-45.2	12.1		4.05 ± 0.43	1.73 ± 0.21	2.12 ± 0.26	−2.64 ± 0.28	2.53 ± 0.64	3.10 ± 0.78	1.26	5.93	7.66	S
12062806959	72496561	264.3	-31.9	9.9		4.06 ± 0.29	2.79 ± 0.23	4.56 ± 0.38	−2.71 ± 0.19	3.78 ± 0.62	6.1 ± 1.0	5.56	4.27	10.08	S
12070343380	72964979	215.8	-47.6	19.6		2.58 ± 0.15	3.68 ± 0.27	7.51 ± 0.56	−3.82 ± 0.23	3.77 ± 0.39	7.71 ± 0.80	8.28	16.07	26.42	S
12070635903	73216707	263.9	-48.8	12.0		2.26 ± 0.16	2.55 ± 0.23	3.12 ± 0.28	−3.72 ± 0.26	3.12 ± 0.36	3.82 ± 0.44	8.35	16.70	25.71	S
12071115416	73628227	166.4	-52.2	4.8		2.97 ± 0.13	2.80 ± 0.15	4.57 ± 0.25	−3.44 ± 0.16	3.18 ± 0.25	5.20 ± 0.42	9.81	6.16	16.76	S
12071729405	74160607	149.9	-44.4	11.9	2S_0918-549 (1.1) GS_0836-429 (1.3)	4.96 ± 0.77	0.74 ± 0.13	2.44 ± 0.42	−2.40 ± 0.33	1.33 ± 0.48	4.3 ± 1.5	10.22	19.20	31.49	S
12071740071	74171263	91.7	6.5	3.3	**4U_0614+09**	3.012 ± 0.084	6.14 ± 0.18	22.57 ± 0.67	−3.16 ± 0.10	6.43 ± 0.30	23.6 ± 1.1	6.22	15.69	23.69	S
12071754845	74186050	276.1	-37.9	13.2		3.53 ± 0.29	3.51 ± 0.35	1.43 ± 0.14	−2.91 ± 0.23	4.71 ± 0.80	1.92 ± 0.33	1.33	3.29	6.78	S
12071976867	74380873	279.9	-16.1	7.9		2.926 ± 0.095	3.99 ± 0.15	6.52 ± 0.25	−3.43 ± 0.11	4.55 ± 0.25	7.43 ± 0.41	8.35	10.44	20.13	S
12072234430	74597625	270.4	-11.8	10.6		2.60 ± 0.11	2.60 ± 0.13	5.30 ± 0.27	−3.62 ± 0.15	2.95 ± 0.21	6.03 ± 0.42	1.62	21.33	23.47	M
12072352796	74702382	285.3	-36.7	15.2		3.46 ± 0.34	1.52 ± 0.18	1.86 ± 0.22	−3.02 ± 0.29	1.97 ± 0.38	2.41 ± 0.47	2.80	5.53	8.81	S
12072521033	74843435	269.3	-20.1	11.7		2.98 ± 0.16	3.06 ± 0.20	4.99 ± 0.33	−3.28 ± 0.19	3.56 ± 0.38	5.81 ± 0.62	12.72	7.41	20.64	M
12072644788	74953593	280.7	-25.8	10.9		2.92 ± 0.20	1.78 ± 0.14	3.63 ± 0.29	−3.30 ± 0.23	2.12 ± 0.27	4.34 ± 0.56	8.37	5.77	14.59	M
12072823619	75105219	105.5	48.5	7.4		5.10 ± 0.88	1.07 ± 0.20	1.32 ± 0.25	−2.43 ± 0.41	1.90 ± 0.80	2.33 ± 0.98	5.64	4.69	10.99	S
12073077620	75332028	275.8	-8.6	9.2		3.19 ± 0.19	4.06 ± 0.24	4.98 ± 0.29	−3.61 ± 0.22	5.06 ± 0.35	6.19 ± 0.43	10.80	4.91	16.38	M
12073126975	75367781	245.6	-30.9	9.6		3.52 ± 0.18	2.80 ± 0.17	3.43 ± 0.21	−2.90 ± 0.15	3.72 ± 0.42	4.56 ± 0.52	7.11	3.11	10.57	M
12080230593	75544208	287.8	-29.6	12.3		3.34 ± 0.23	2.04 ± 0.17	5.84 ± 0.49	−2.94 ± 0.21	2.63 ± 0.40	7.5 ± 1.1	14.95	11.52	30.70	S
12080240937	75554535	135.3	47.1	7.4		3.11 ± 0.24	2.19 ± 0.15	4.47 ± 0.31	−4.06 ± 0.34	2.86 ± 0.19	5.84 ± 0.39	7.09	17.82	25.58	S
12080342974	75642973	268.3	-5.0	8.9		2.88 ± 0.10	3.57 ± 0.15	5.84 ± 0.25	−3.38 ± 0.12	4.14 ± 0.27	6.77 ± 0.45	1.34	11.16	24.61	M
12080553126	75825931	275.5	0.5	8.9		2.826 ± 0.097	3.79 ± 0.15	6.18 ± 0.25	−3.39 ± 0.11	4.41 ± 0.27	7.20 ± 0.45	2.43	7.15	17.94	M
12080657797	75917007	241.2	-42.3	13.6		3.71 ± 0.40	1.92 ± 0.25	1.57 ± 0.20	−2.77 ± 0.30	2.62 ± 0.66	2.14 ± 0.54	2.95	3.05	7.03	S
12080880446	76112459	277.0	-6.4	4.8		2.93 ± 0.12	2.30 ± 0.12	5.64 ± 0.29	−3.44 ± 0.15	2.55 ± 0.20	6.25 ± 0.51	1.20	6.89	20.64	M
12080974583	76192976	272.8	-23.4	7.2		2.74 ± 0.14	2.08 ± 0.13	5.09 ± 0.32	−3.54 ± 0.19	2.29 ± 0.21	5.62 ± 0.53	10.87	7.69	19.17	M
12081429372	76579779	261.0	-19.9	8.9		3.13 ± 0.24	2.50 ± 0.22	3.06 ± 0.27	−3.33 ± 0.26	2.91 ± 0.39	3.56 ± 0.48	12.03	4.34	17.29	M
12081623151	76746353	251.3	-28.6	15.9		3.66 ± 0.19	3.55 ± 0.21	2.89 ± 0.17	−3.01 ± 0.15	4.46 ± 0.45	3.64 ± 0.37	2.94	4.37	8.89	S
12081653647	76776845	274.2	-15.8	9.8		3.36 ± 0.17	2.35 ± 0.15	5.77 ± 0.37	−3.05 ± 0.16	2.85 ± 0.32	6.99 ± 0.78	2.32	23.11	26.42	M
12082257272	77298893	227.4	-44.6	1.1		3.301 ± 0.069	8.18 ± 0.20	116.6 ± 2.8	−3.249 ± 0.068	9.59 ± 0.35	136.9 ± 4.9	70.93	66.24	157.61	S
12082257914	77299523	253.2	-26.5	4.8		3.20 ± 0.11	6.13 ± 0.25	10.01 ± 0.41	−3.18 ± 0.12	7.64 ± 0.50	12.47 ± 0.82	11.35	9.72	21.61	M
12082432675	77447073	257.6	-47.6	12.0		2.75 ± 0.20	2.05 ± 0.18	3.35 ± 0.29	−3.49 ± 0.24	2.40 ± 0.29	3.92 ± 0.48	14.01	10.79	25.92	S
12082461403	77475783	275.0	-6.8	4.8		3.32 ± 0.11	4.47 ± 0.18	5.47 ± 0.22	−3.10 ± 0.10	5.38 ± 0.35	6.59 ± 0.43	1.15	12.89	14.28	M
12082549804	77550612	254.8	-29.1	8.2		2.77 ± 0.15	4.05 ± 0.26	4.95 ± 0.31	−3.66 ± 0.19	4.42 ± 0.38	5.41 ± 0.46	7.09	8.64	16.30	S
12082560129	77560918	256.4	-54.9	15.6		3.23 ± 0.23	2.65 ± 0.22	2.16 ± 0.18	−3.15 ± 0.22	3.20 ± 0.44	2.61 ± 0.36	6.72	10.39	17.56	M
12082806722	77766722	273.4	-49.1	13.1		3.63 ± 0.34	1.84 ± 0.21	3.00 ± 0.35	−2.80 ± 0.27	2.38 ± 0.54	3.89 ± 0.88	2.30	7.55	10.21	S
12082976701	77923103	283.8	-9.6	10.8		3.59 ± 0.29	2.10 ± 0.20	3.43 ± 0.32	−2.67 ± 0.20	3.24 ± 0.59	5.28 ± 0.96	1.39	6.70	10.22	S
12090720701	78644718	292.7	-26.0	7.3		2.747 ± 0.097	3.18 ± 0.13	6.49 ± 0.28	−3.45 ± 0.12	3.61 ± 0.23	7.37 ± 0.47	15.89	9.70	26.47	M
12090880535	78790932	92.2	15.6	7.5	**4U_0614+09**	3.12 ± 0.13	5.67 ± 0.23	6.95 ± 0.28	−3.41 ± 0.13	5.71 ± 0.28	9.43 ± 0.46	2.18	7.61	10.97	S
12090947623	78844430	295.5	-3.4	15.9		3.46 ± 0.28	1.74 ± 0.16	3.55 ± 0.34	−3.28 ± 0.28	1.89 ± 0.30	3.85 ± 0.62	14.10	5.15	19.87	M

Table 5:: GBM Type 1 Events continued from previous page

ID	Peak	Ra	Dec	Error	Name(distance)	BB temp	BB flux	BB Flnc	PL index	PL Flux	PL Flnc	Rise	Fall	Duration	Structure
	s				(sigma)	keV	$10{-}8$ erg cm^{-2} s^{-1}	10^{-7}erg cm^{-2}		10^{-8}erg cm^{-2} s^{-1}	10^{-7} erg cm^{-2}	sec	sec	sec	
12090966157	78862958	230.5	-28.7	13.6		3.21 ± 0.30	4.11 ± 0.37	3.35 ± 0.30	-4.14 ± 0.43	5.34 ± 0.48	4.36 ± 0.39	2.86	4.68	9.45	S
12091235378	79091385	272.3	-35.5	7.2		3.11 ± 0.17	3.14 ± 0.21	3.85 ± 0.26	-3.19 ± 0.18	3.77 ± 0.40	4.61 ± 0.49	5.37	8.81	15.39	S
12091323339	79165740	267.0	-18.9	6.8		3.09 ± 0.17	2.64 ± 0.18	5.39 ± 0.37	-3.28 ± 0.19	2.99 ± 0.34	6.11 ± 0.70	14.11	3.66	18.31	M
12091828018	79602421	91.5	7.2	11.9	**4U_0614+09**	3.11 ± 0.13	3.28 ± 0.16	4.02 ± 0.20	-3.19 ± 0.14	4.05 ± 0.34	4.96 ± 0.42	1.26	16.21	17.81	S
12092148059	79881673	258.2	-52.0	9.6		3.58 ± 0.21	5.19 ± 0.35	2.11 ± 0.14	-2.98 ± 0.17	6.61 ± 0.75	2.69 ± 0.30	4.45	5.55	10.39	S
12092217967	79937968	269.5	-41.0	9.9		3.11 ± 0.17	2.49 ± 0.16	3.05 ± 0.20	-3.14 ± 0.17	3.13 ± 0.33	3.84 ± 0.41	4.75	4.82	10.21	S
12100281652	80865648	138.6	-72.9	6.0		2.96 ± 0.11	2.22 ± 0.10	6.35 ± 0.28	-3.19 ± 0.12	2.78 ± 0.21	7.95 ± 0.60	10.14	15.02	26.49	S
12100862493	81364893	188.6	-17.2	1.7		3.16 ± 0.16	4.29 ± 0.20	10.50 ± 0.50	-3.96 ± 0.21	5.66 ± 0.26	13.86 ± 0.63	4.01	11.25	15.98	S
12101875093	82241502	274.1	-23.0	9.6		2.99 ± 0.12	4.38 ± 0.23	5.36 ± 0.28	-3.20 ± 0.13	5.30 ± 0.43	6.48 ± 0.53	9.03	3.54	13.31	M
12101900479	82253284	241.1	-42.8	12.4		3.23 ± 0.28	2.72 ± 0.28	2.22 ± 0.23	-3.20 ± 0.28	3.02 ± 0.50	2.46 ± 0.40	3.16	8.25	11.90	S
12102423481	82708271	274.0	-7.7	6.6		3.36 ± 0.16	4.02 ± 0.19	4.93 ± 0.23	-3.72 ± 0.20	5.02 ± 0.26	6.16 ± 0.32	9.18	3.46	14.07	M
12102585037	82856237	238.1	-68.7	11.3		3.28 ± 0.32	3.72 ± 0.35	3.04 ± 0.28	-4.03 ± 0.43	4.90 ± 0.45	3.99 ± 0.37	3.14	5.60	9.21	S
12103137028	83326622	274.6	-10.7	6.5		3.41 ± 0.11	4.82 ± 0.19	5.91 ± 0.23	-2.994 ± 0.097	6.03 ± 0.40	7.39 ± 0.49	8.98	4.39	13.86	M
12110910913	84078119	273.4	-4.0	6.8		2.820 ± 0.098	3.17 ± 0.13	6.48 ± 0.27	-3.41 ± 0.12	3.72 ± 0.23	7.59 ± 0.48	1.49	9.31	21.10	M
12111324503	84437310	259.3	-18.0	7.6		2.74 ± 0.18	3.91 ± 0.27	6.39 ± 0.44	-4.54 ± 0.33	5.01 ± 0.35	8.18 ± 0.57	1.54	5.57	17.37	M
12111517342	84602951	275.8	-27.9	9.6		3.17 ± 0.12	3.78 ± 0.18	6.17 ± 0.30	-3.09 ± 0.12	4.79 ± 0.37	7.82 ± 0.61	1.79	3.20	15.34	M
12112127678	85131694	256.5	-35.3	9.7		3.22 ± 0.18	3.13 ± 0.20	2.56 ± 0.16	-3.25 ± 0.18	3.76 ± 0.36	3.07 ± 0.30	5.02	9.04	14.97	S
12121216694	86935093	284.0	6.9	9.9		3.21 ± 0.11	2.75 ± 0.12	6.74 ± 0.30	-3.12 ± 0.11	3.29 ± 0.24	8.07 ± 0.60	2.76	15.88	19.22	M
12121222136	86940537	153.4	-61.0	6.8	**2S_0918-549**	2.89 ± 0.12	2.49 ± 0.13	4.07 ± 0.21	-3.21 ± 0.14	3.17 ± 0.27	5.18 ± 0.44	4.25	15.82	21.14	S
12121382175	87086961	94.6	7.4	1.7	**4U_0614+09**	3.219 ± 0.048	4.042 ± 0.071	34.65 ± 0.61	-3.150 ± 0.048	4.90 ± 0.14	42.0 ± 1.2	5.74	43.14	51.37	S
13010467917	88973529	264.8	-15.6	4.8		3.12 ± 0.10	3.22 ± 0.12	7.89 ± 0.31	-3.24 ± 0.11	3.89 ± 0.23	9.52 ± 0.57	11.34	13.46	25.75	M
13012372764	90619972	257.4	-38.8	1.1		3.132 ± 0.073	2.664 ± 0.074	39.1 ± 1.0	-3.167 ± 0.074	3.22 ± 0.14	47.4 ± 2.1	34.91	116.28	183.08	M
13012978737	91144343	97.3	-3.1	10.3	**4U_0614+09**	3.17 ± 0.13	2.97 ± 0.15	4.85 ± 0.25	-3.03 ± 0.13	3.91 ± 0.36	6.39 ± 0.59	2.80	17.43	20.55	S
13020216053	91427258	276.7	-19.4	8.5		3.03 ± 0.12	3.53 ± 0.18	5.77 ± 0.29	-3.25 ± 0.13	4.21 ± 0.32	6.88 ± 0.53	12.11	4.04	16.89	M
13020579710	91750115	102.3	-3.1	9.2	**4U_0614+09**	3.64 ± 0.13	5.19 ± 0.22	6.36 ± 0.27	-2.93 ± 0.10	6.71 ± 0.52	8.22 ± 0.63	2.63	8.93	12.14	S
13021350602	92412210	275.5	-5.9	12.2		2.81 ± 0.21	1.90 ± 0.18	2.32 ± 0.22	-3.26 ± 0.25	2.28 ± 0.33	2.79 ± 0.41	11.76	9.68	24.56	S
13022239487	93178695	272.6	-22.5	17.3		3.38 ± 0.19	2.65 ± 0.18	3.24 ± 0.22	-3.03 ± 0.18	3.30 ± 0.39	4.05 ± 0.48	7.61	9.55	17.51	M

REFERENCES

Agostinelli, S. and et, a.: 2003, *Nuclear Instruments and Methods A* **506**, 250

Band, D., Matteson, J., Ford, L., Schaefer, B., Palmer, D., Teegarden, B., Cline, T., Briggs, M., Paciesas, W., Pendleton, G., Fishman, G., Kouveliotou, C., Meegan, C., Wilson, R., and Lestrade, P.: 1993, *ApJ* **413**, 281

Belian, R. D., Conner, J. P., and Evans, W. D.: 1976, *ApJ* **206**, L135

Bildsten, L.: 1998, in R. Buccheri, J. van Paradijs, & A. Alpar (ed.), *NATO ASIC Proc. 515: The Many Faces of Neutron Stars.*, pp 419–+

Boutloukos, S., Miller, M. C., and Lamb, F. K.: 2010, *The Astrophysical Journal Letters* **720(1)**, L15

Camero-Arranz, A., Finger, M. H., Wilson-Hodge, C., Jenke, P. A., Steele, I., Gutierrez-Soto, J., and Coe, M. J.: 2011, *The Astronomer's Telegram* 3166

Chenevez, J., Falanga, M., Kuuklers, E., Brandt, S., Lund, N., and Cumming, A.: 2008, in *Proceedings of the 7th INTEGRAL Workshop*, p. 33

Connaughton, V., Briggs, M. S., Goldstein, A., Meegan, C. A., Paciesas, W. S., Preece, R. D., Wilson-Hodge, C. A., Gibby, M. H., Greiner, J., Gruber, D., Jenke, P., Kippen, R. M., Pelassa, V., Xiong, S., Yu, H.-F., Bhat, P. N., Burgess, J. M., Byrne, D., Fitzpatrick, G., Foley, S., Giles, M. M., Guiriec, S., van der Horst, A. J., von Kienlin, A., McBreen, S., McGlynn, S., Tierney, D., and Zhang, B.-B.: 2015, *ApJS* **216**, 32

Cornelisse, R., Verbunt, F., in't Zand, J. J. M., Kuulkers, E., and Heise, J.: 2002a, *A&A* **392**, 931

Cornelisse, R., Verbunt, F., in't Zand, J. J. M., Kuulkers, E., Heise, J., Remillard, R. A., Cocchi, M., Natalucci, L., Bazzano, A., and Ubertini, P.: 2002b, *A&A* **392**, 885

Cumming, A. and Bildsten, L.: 2000, *ApJ* **544**, 453

Cumming, A., Macbeth, J., in't Zand, J. J. M., and Page, D.: 2006, *ApJ* **646**, 429

Degenaar, N., Miller, J. M., Wijnands, R., Altamirano, D., and Fabian, A. C.: 2013, *ApJ* **767**, L37

Fujimoto, M. Y., Hanawa, T., and Miyaji, S.: 1981, *ApJ* **247**, 267

Galloway, D. K., Muno, M. P., Hartman, J. M., Psaltis, D., and Chakrabarty, D.: 2008, *ApJS* **179**, 360

Grindlay, J., Gursky, H., Schnopper, H., Parsignault, D. R., Heise, J., Brinkman, A. C., and Schrijver, J.: 1976, *ApJ* **205**, L127

Hakala, P., Ramsay, G., Muhli, P., Charles, P., Hannikainen, D., Mukai, K., and Vilhu, O.: 2005, *MNRAS* **356**, 1133

Harris, W. E.: 1996, *AJ* **112**, 1487

in't Zand, J. J. M.: 2005, *A&A* **441**, L1

in't Zand, J. J. M., Bassa, C. G., Jonker, P. G., Keek, L., Verbunt, F., Méndez, M., and Markwardt, C. B.: 2008, *A&A* **485**, 183

in't Zand, J. J. M., Jonker, P. G., and Markwardt, C. B.: 2007, *A&A* **465**, 953

Kuulkers, E., den Hartog, P. R., in't Zand, J. J. M., Verbunt, F. W. M., Harris, W. E., and Cocchi, M.: 2003, *A&A* **399**, 663

Kuulkers, E., in't Zand, J. J. M., Atteia, J.-L., Levine, A. M., Brandt, S., Smith, D. A., Linares, M., Falanga, M., Sánchez-Fernández, C., Markwardt, C. B., Strohmayer, T. E., Cumming, A., and Suzuki, M.: 2010, *A&A* **514**, A65

Lewin, W. H. G., van Paradijs, J., and Taam, R. E.: 1993, *Space Sci. Rev.* **62**, 223

Linares, M., Connaughton, V., Jenke, P., van der Horst, A. J., Camero-Arranz, A., Kouveliotou, C., Chakrabarty, D., Beklen, E., Bhat, P. N., Briggs, M. S., Finger, M., Paciesas, W. S., Preece, R., von Kienlin, A., and Wilson-Hodge, C. A.: 2012, *ApJ* **760**, 133

Matsuoka, M., Kawasaki, K., Ueno, S., Tomida, H., Kohama, M., Suzuki, M., Adachi, Y., Ishikawa, M., Mihara, T., Sugizaki, M., Isobe, N., Nakagawa, Y., Tsunemi, H., Miyata, E., Kawai, N., Kataoka, J., Morii, M., Yoshida, A., Negoro, H., Nakajima, M., Ueda, Y., Chujo, H., Yamaoka, K., Yamazaki, O., Nakahira, S., You, T., Ishiwata, R., Miyoshi, S., Eguchi, S., Hiroi, K., Katayama, H., and Ebisawa, K.: 2009, *PASJ* **61**, 999

Meegan, C., Lichti, G., Bhat, P. N., Bissaldi, E., Briggs, M. S., Connaughton, V., Diehl, R., Fishman, G., Greiner, J., Hoover, A. S., van der Horst, A. J., von Kienlin, A., Kippen, R. M., Kouveliotou, C., McBreen, S., Paciesas, W. S., Preece, R., Steinle, H., Wallace, M. S., Wilson, R. B., and Wilson-Hodge, C.: 2009, *ApJ* **702**, 791

Murakami, T., Inoue, H., Koyama, K., Makishima, K., Matsuoka, M., Oda, M., Ogawara, Y., Ohashi, T., Makino, F., Shibazaki, N., Tanaka, Y., Hayakawa, S., Kunieda, H., Nagase, F., Masai, K., Tawara, Y., Miyamoto, S., Tsunemi, H., Yamashita, K., and Kondo, I.: 1983, *PASJ* **35**, 531

Nelemans, G., Jonker, P. G., Marsh, T. R., and van der Klis, M.: 2004, *MNRAS* **348**, L7

Ott, C. D., Reisswig, C., Schnetter, E., O'Connor, E., Sperhake, U., Löffler, F., Diener, P., Abdikamalov, E., Hawke, I., and Burrows, A.: 2011, *Physical Review Letters* **106(16)**, 161103

Serino, M., Shidatsu, M., Ueda, Y., Matsuoka, M., Negoro, H., Yamaoka, K., Kennea, J. A., Fukushima, K., and Nagayama, T.: 2015, *PASJ* **67**, 30

Swank, J. H., Becker, R. H., Boldt, E. A., Holt, S. S., Pravdo, S. H., and Serlemitsos, P. J.: 1977, *ApJ* **212**, L73

Weinberg, N. N., Bildsten, L., and Schatz, H.: 2006, *ApJ* **639**, 1018

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